



School Nominee Presentation Form

ELIGIBILITY CERTIFICATIONS

School and District's Certifications

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

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

U.S. Department of Education Green Ribbon Schools

Public Charter Title I Magnet Private Independent Rural

Name of Principal: Dr. Heather Hanson

Official School Name: School of Engineering and Arts

Official School Name Mailing Address: 1751 Kelly Drive, Golden Valley, MN 55427

County: Hennepin State School Code Number *:

Telephone: 763-504-7200 Fax: 763-504-7204

Web site/URL: sea.rdale.org E-mail: heather_hanson@rdale.org

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

Heather S. Hanson

, principal Date: 2/10/2020

Name of Superintendent: Dr. Carlton Jenkins District Name: Robbinsdale Area Schools

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



Date: 2/11/2020

(Superintendent's Signature)

Nominating Authority's Certifications

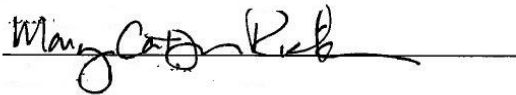
The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

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

Name of Nominating Agency: Minnesota Department of Education

Name of Nominating Authority: Mary Cathryn Ricker, Commissioner of Education

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



Date: February 14, 2020

SUBMISSION

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

OMB Control Number: 1860-0509

Expiration Date: March 31, 2021

Public Burden Statement

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

School of Engineering and Arts, Minnesota

Summary Narrative

Located in Golden Valley, Minnesota and part of the Robbinsdale Area School District, the School of Engineering and Arts (SEA), is rooted in the STEAM (science-technology-engineering-arts-math) philosophy providing our K-5 elementary aged students with a stimulating and engaging atmosphere fostering students' innate curiosity and joy of discovery to achieve high levels of success. We operate with two constant queries in mind, "What if?" and "How are we different?" When our doors opened in 2012, we set out to create a community that broke the traditional educational paradigm yet had to fit within the established boundaries for a public school. Today, we can proudly say these queries have helped to establish a school full of risk takers, problem solvers, and critical thinkers. This was acknowledged and rewarded in 2018 when we received the National Blue Ribbon Award. We strive daily to engage one another in the typical teacher to student and inversely student to teacher connection, but also uniquely the student to student, teacher to teacher, and school to community connections all the while embedding the environment and sustainability practices throughout.

Our school traditions, not just the curriculum, are built on the foundation of inquiry and hands-on learning. We pride ourselves on creating an environment of independent, yet collaborative, innovators and thinkers so as to take on our current and future environmental challenges. Our students develop in all areas of their lives. We foster our student's natural curiosity and celebrate wonders in our student-driven classrooms, where student voice is more prevalent than the one teacher voice. We do not work, learn or teach subjects within silos; hence, our daily goal is intentional instructional integration utilizing the state standards as our guide in every aspect of learning. Within all of this, we embed Dweck's work on growth mindsets acknowledging the power of 'yet', that failing is a part of the learning process, and perseverance within every task regardless of the complexity. Therefore, our students learn at an early age the importance of observation utilizing all senses and how to craft questions that answer a deeper 'why'.

Originally built in 1970 with an open school concept, our site was named after Minnesota environmentalist, Sigurd Olson, as it was an environmentally focused school. Since our occupancy in 2012, we have been working to re-establish native plants, orchards and gardens. We started composting and recycling immediately and have led the district in these practices ever since. Our Junior Naturalist student leaders monitor and educate the school community energy use, proper recycling, and care of our school yard gardens and chickens. We are proud of our reduction of water use and our solid waste diversion rate, which is just over 56%, and work each year for improvements. Our staff and students utilize water bottle filling stations and natural daylight is most often the primary source of lighting within classrooms as teachers choose not to turn on lights. Approximately 95% of our population either walks, bikes, buses or carpools to and from school each day. We ensure vehicle loading and unloading occurs at least 25 feet from building air intakes, doors and windows and this space is also staffed to ensure safety of our children and drivers. Bus routes are electronically monitored and analyzed on a regular basis to determine efficiency with changes made accordingly. To do this, we combine with a second elementary school which does not occur in any other elementary school within the District.

Our school site does not use irrigation on the grounds, instead we focus on native habitat to balance soil biology thus reducing the need for watering. We have about 1600 square feet of native grasses and flowers surrounding the main sidewalk into the school which literally buzz with action throughout the summer and fall. Approximately 18% of our school yard is devoted to the Minnesota Department of Natural Resource's School Forest program where students not only learn core content, but also sustainable forest management practices as they work alongside Minnesota DNR Foresters and Minnesota Conservation Corps members. Overall, our school site has more native and natural green space than typical of a public elementary school with approximately 75% of the school grounds devoted to ecologically beneficial use. We also partner with Hennepin County Forestry in the creation and management of a 30-fruit tree orchard located on school grounds.

In order to advocate and promote a healthy culture within our school, we encourage walking and biking as

modes of transportation, trying new fruits and vegetables at lunch, encouraging healthy alternatives to celebrations, and participating in Farm to School programs. Students receive a combined 210 minutes of weekly structured physical education and unstructured recess time. At least 50% of our students' annual physical education takes place outdoors. We have an active Fuel Up to Play 60 student leadership group which advocates for in-school health and wellness by creating "Jammin' Minutes" videos on the morning 'news' show. Launched by the NFL, the National Dairy Council, and USDA, the MN Vikings have been to SEA several times to celebrate our successes with Fuel Up to Play 60 which include a \$10,000 Hometown grant and recognition of being an Ultimate Dance Competition winner of \$500 for our creative video focused on stopping bad eating and encouraging healthy eating and the drinking of milk. Our school food service department helps with the promotion of nutrition by providing connections with a Farm to School program and providing fruit, vegetables and a salad option for all.

The School of Engineering and Arts uses a coordinated school health approach to assist in promoting overall school health issues. For example, our 5th grade students learn from the Golden Valley Police Department who provide education promoting healthy living as well as information on chemical substances and advocacy to just say no. Each of our Kindergarten students receive a free breakfast while all other students also have this as an option to start their day. Our nurse provides awareness of allergies within the building. Signs are posted outside of classrooms where students with severe allergies spend time and peanut free tables in the cafeteria are offered. School nutrition services provide alternative options for students needing peanut-free, dairy-free or gluten-free foods.

Our staff work daily to support student mental health and school climate. Collaboratively our school community works to create expectations, practice them and follow through with consequences – both good and not so good depending upon choices. Students are acknowledged and celebrated weekly as a school community for exhibiting positive behaviors with themselves, towards others and the world. A team comprised of administration, school nurse, social worker, psychiatrist and staff depending upon need meet weekly to discuss students, create a plan of evaluation or reevaluation for services, and/or develop plans of support for social/emotional, behavioral and/or academic need. School climate is enhanced through our buddy classrooms where each primary grade level classroom is paired with an intermediate grade classroom to participate in various activities focused on academics, outdoors and fun. This unique mentorship builds a culture of family in the building as students learn from one another.

We are situated in a diverse and vibrant neighborhood that has fully embraced our school in multiple ways. Many of our retired neighbors volunteer during the school day in a variety of contexts. These neighbors support our school financially with donations as well as always keeping an eye on our outdoor classrooms, gardens, orchard and chickens. We actively partner with the neighborhood Pumpkin Festival in staffing the pumpkin education table with our student Junior Naturalists, participating in the parade, and growing large pumpkins and tall sunflowers.

We partner with one of our high schools where students volunteer on a bi-monthly occurrence for our Seeds for Science program to teach scientific concepts in hands-on, real life applicable ways. Moreover, numerous members of local companies and organizations visit SEA as partners in education. These visitors contribute knowledge and experience in terms of careers, content, and context to real life, especially in terms of sustainability focused careers and green technologies. At times, our students experience full immersion learning when they are taken into the field and guided by content experts. Whether it is at an environmental learning center, a nearby wetland, a National Park or our school grounds, each interaction is unique and powerful for our students, as they showcase contributing members of society making a positive impact within their field, all the while showcasing what students are learning foundationally within a real world context.

Each year focus on the outdoors and environmental and sustainability education is part of the required staff professional development. Partnering with such agencies as MN DNR, Project Learning Tree, National Fisheries and Wildlife and Three Rivers Park System has provided experiences in the outdoors focusing on core content integration and the building of self-knowledge for our staff. Additionally, our staff have facilitated professional development for others wanting more knowledge and experience on environmental and sustainability education. This has happened at both state-wide conferences and district-wide trainings. All this combined, creates competent and confident teachers willing to take students outdoors and delve into environmental and sustainability education.

In our integrated curriculum and instructional practices, we work collaboratively to define a scope and sequence where standards are addressed and achieved, project-based learning occurs, student engagement is strong, and rigorous

learning occurs daily. Staff seek support from one another for teaching strategies and resources in both enrichment and remediation. Regardless the subject, the curricular formula used focuses on students creating observations from which wonders are formed and in turn questions are derived. It is from student driven questions, combined with standards, that learning targets are composed. Students learn best when engaged and their voice is heard.

We recognize the best place to learn about the environment and develop empathy to advocate for sustainability is the out-of-doors. Teachers are frequently found outdoors teaching required core content in math, language arts, music, art, physical education and science combined with outdoor experiences. If not outdoors, we work to teach students about life with the numerous in-house animals and plants. Students are the primary caretakers of these living creatures allowing the opportunity to develop empathy and connection which as research shows is the main element in which to develop environmental literacy. Each grade level infuses science, technology, engineering and mathematical thinking and content knowledge into every aspect of our daily schedule. A key aspect we work to embed in most everything are the practices of science and engineering, particularly observation and questioning. We encourage questioning by our children and strive to ensure their voice is the primary one heard during instruction and learning. Through this Socratic-type teaching style, we ensure students are developing critical thinking and problem-solving skills and not just sitting through rote memorization lectures. Additionally, we work to develop students' spatial awareness and visual literacy. This is important for STEAM, the environment and sustainability as it allows children to develop the sense and need for a variety of perspectives.

We strive to educate our children for the unknown and prepare them for a world in which we have no idea what careers they might have. During their time at SEA, students learn from multiple environmental professionals including MN DNR Foresters, Fisheries, Invasive Specialists and Conservation Officers; National, State and County Park Rangers and Interpretive Naturalists; and numerous scientists and engineers with a broad smattering of green career focuses. In addition to learning from professionals in environmental careers, students attend environmentally focused field trips multiple times each of their school years with rarely a repeat to a visit during their six-year tenure. Such locations include Mississippi River National Park for the Working Field Trip where students studied locks, dams and alternative energies, numerous Three River Parks, MN Arboretum, Zoos, MN Twins Stadium Green Tour, Science Museum, Target HQ, and related locations.

We educate our children about different types of pollution, climate change and how our choices as consumers and producers impact the Earth. An example of such learning includes an all-school inspirational speaker, Wally Funk, who challenged students to imagine and design technology to aid in the cleanup of 'space junk'. This practice and new information allowed all of us to think about our human impact beyond our own planet. Another example occurs in the raising of 300+ Rainbow Trout from hatch to release. Students learn about these delicate indicator species all the while creating questions through observations. Students then conduct investigations focusing on water quality with Aquaponics. We strive to help our students make connections in all they study and ensure the perspective of the greater world as they do so.

Students are frequently found outdoors learning in our prairie, butterfly garden, greenhouse, vegetable gardens, or small forest officially known as the SEA-cret Forest per our partnership with the Minnesota Department of Natural Resource (DNR). Additionally, students help to raise, make observations, and collect data from animals including chickens, tortoises, reptiles, a tarantula, and many fish including 300 rainbow trout per funding from the DNR. Students participate in real science. Fourth graders volunteer with Hennepin County's RiverWatch program collecting and reporting data from an adopted Creek twice annually. Kindergarten students plant tulips each fall and make observations each spring reporting data to a citizen science website. Civic activism for sustainability practices occurs as students remind teachers and one another to conserve energy and to sort waste into compost, recycling or trash. Through all of this, our aim is to create children who are hope-filled, not hopeless, with the current and projected environmental challenges. The School of Engineering and Arts is committed to continue our journey in environmental stewardship through educational efforts, partnerships and changes in practices in order to ensure best practices of sustainability and environmental education.

Cross-Cutting Programs: Participation in green school programs

Is your district participating in a local, state or national 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? If yes, describe it: **Yes, we are using UNESCO who uses SkySpark Analytics. This software benchmarks our utility consumption, which includes electric and gas. This is compiled into daily and annual trend data.**

Has your building received any awards for facilities, health or environmental education?

- **2019 - MN Science Teacher of the Year, Carrie Ehn, 5th grade teacher**
- **2019 - Hennepin County Healthy Forest grant of \$5500 which provided monies for the purchase and maintenance of 30 fruit trees planted on site.**
- **2019 - MN DNR No Child Left Inside grant of \$3000 which provided monies for the purchase of equipment to enhance nature-based learning.**
- **2016 - MN Department of Agriculture grant of \$1000 which provided monies for the purchase and installment of a chicken coop/run for our school's chickens.**
- **2016 - Seven Dreams grant of \$3000 which provided monies for the purchase, install and use of a greenhouse used yearly for the propagation of vegetables.**
- **2014 - MN Science Teacher of the Year, Cara Rieckenberg, Program Coordinator**

Does the district have a sustainability program or coordinator? If yes, describe it.

Our district has multiple positions that act within the lens of sustainability:

- **Our District Director of Buildings and Grounds advocates for the best practice in eliminating greenhouse gases and planning construction to include green methods of code compliance.**
- **Our District Director of Operations oversees all cleaning related items including the choice of safe rated chemicals, disposal of chemicals and employee training for health and safety. Outside of the district, he helps to oversee the recycling/composting Hennepin County waste grant program.**
- **Our District Program Assistant of Buildings and Grounds is responsible for utilities throughout the district noting discrepancies for investigation as well as overseeing load shed notifications, assisting in past energy data recovery, and co-managing the recycling/composting program.**
- **We have a STEAM Program Coordinator onsite at the School of Engineering and Arts. Approximately 20% of her time is focused on the development and maintenance of the school yard and school curriculum with sustainability and environmental education opportunities in mind. Outside of this role, she is adjunct faculty for local universities where she creates and teaches outdoor focused experiential graduate courses.**

Pillar 1 - Element A: Reduced or eliminated greenhouse gas emissions

Greenhouse Gas Emission is not tracked at our site as the district only tracks GHG emissions rate at the two high schools per state mandate. Our district does not use EPA Energy Star or have an Energy Master Plan for the buildings. Currently, the district does not track non-transportation energy use or sources of school's energy. Our building does participate in electrical curtailment enrollment. Site runs a building automation that allows HVAC and lighting to maximize electric and gas savings and reduce greenhouse gases. Water usage is controlled with flush values and aerators.

Pillar 1 - Element B: Improved water quality, efficiency, and conservation

1. Reduction in your school's total water consumption from an initial baseline.
 - Average baseline water use (gallons use occupant): **2017-2018=101.02 gallons**
 - Current water use (gallons per occupant): **2018-2019=97.25 gallon**
 - Percentage reduction in domestic water use: **Reduction by 3.7%**
 - Percentage reduction in irrigation water use: **Not applicable. No irrigation on site**
 - Time period measured (mm/yyyy-mm/yyyy): **07/2017-06/2019**
 - Explain how you documented this reduction (ENERGY STAR Portfolio Manager, utility bills, school district reports): **We utilized utility bills to document this reduction.**
2. Measures you are taking to reduce water consumption, such as controlling leaks, water -efficient devices, and re-use practices. **Any leaks are reported immediately via an electronic computer system by onsite personnel. If onsite staff are not able to fix, district staff aide in leak control. In terms of water-efficient devices, the school has low flow faucets on all sinks, all flushing devices are automated, and there are currently two bottle filling water fountain stations on site (one upstairs and one downstairs). Any future installed devices will be the newest and most energy efficient devices as per current construction practices held by the school district. In terms of a re-use practice, we do not have once through cooling.**
3. Percentage of your landscaping that is considered water-efficient and/or regionally appropriate. Types of plants used and location: **100% of our landscaping is considered water-efficient and/or regionally appropriate. In addition, native grasses and flowers are planted along the main sidewalk as well as vegetable gardens throughout the school yard. A portion of the school yard is also devoted to the MN Department of Natural Resources' School Forest program**
4. Describe water sources used for irrigation. **We do not have irrigation on site.**
5. Describe any efforts to reduce storm water runoff and/or reduce impermeable surfaces. **Our site has more green space than typical of a public elementary school. Additionally, we are in alignment with state, city and county statute and Bassett Creek Watershed for percentage of impermeable surface ratio.**
6. Measures to ensure the school drinking water is safe, such as lead testing, well testing, and steps to reduce lead. **Per state and federal guidelines, lead testing is conducted every five years with the most recent occurring in 2019. There are no wells on site. Lead-free fixtures are the only fixtures purchased and put into use. Finally, only lead-free soldering is used.**
7. Percentage of the school grounds are devoted to ecologically beneficial uses such as natural areas, rain gardens, and run-off buffer and provide descriptions. **Approximately 75% of the school grounds are devoted to ecologically beneficial use. In terms of intentional plantings, there is a native grass/prairie garden, a native butterfly garden, a vegetable garden plus seven raised bed vegetable gardens. In addition, we partner with the Minnesota Department of Natural Resources and manage a 1.7-acre School Forest which is 18% of the school grounds. Within the school forest, we work to rid the grounds of buckthorn with the MN Conservation Corps and create**

habitat by not removing fallen brush. We also partner with Hennepin County Forestry in the creation and management of a 30-fruit tree orchard on the school grounds.

Pillar 1 - Element C: Reduced Waste Production

1. What percentage of solid waste is diverted from landfilling or incinerating due to reduction, recycling and/or organics diversion (food to people, food to hogs and/or composting)? **56.25%**
 - Monthly garbage service in cubic yards (garbage dumpster size x number of collections per month x percentage full when emptied or collected): **Trash: 4 yard container, 70% full, emptied 3 days a week = 2.8 cubic yards x 3 = 8.4 cubic yards x 4 = 33.6 cubic yards of trash per month**
 - Monthly recycling volume in cubic yards (recycling dumpster size x number of collections per month x percentage full when emptied or collected): **Single Stream Recycling: 4 yd container, 90% full, emptied 3 days/wk. = 3.6 cubic yds x 3 = 10.8 cubic yds x 4 = 43.2 cubic yds of recycling per month**
 - Monthly organics diversion (food to people, food to hogs and/or composting) volume(s) in cubic yards (leftover food collection bin/food scrap and/or soiled paper dumpster size(s) x number of collections per month x percentage full when emptied or collected): **Monthly organics diversion is not measured as it does not consistently occur. Full organic recycling is currently not an option for our school as our district does not provide this option; however, we are currently in the process of seeking funding to start full district composting. We tried organics on site with six 30-gallon composters but are only able to do this in the fall and spring as the winter provides many challenges. Food service waste of fruits and vegetables is fed to onsite animals (chickens, reptiles, etc.).**
 - Recycling and diversion rate: **$((43.2+0) / (33.6+43.2+0)) \times 100 = 56.25\%$**
 - Monthly waste generated per person: **$(33.6/500) = 0.336 \text{ yards/person}$**
2. Percentage of your school's total office/classroom paper content by cost that is post-consumer material or fiber from forests certified as responsibly managed by the Forest Stewardship Council? **30% of paper used within the office is post-consumer material or fiber from certified sourcing with the sustainable forestry initiative.**
3. Types and amounts of hazardous waste generated at your school. **On site, we have no waste as all flammable liquids, corrosive liquids, etc. are used completely to empty. We adhere to the three-year state marshal fire inspection and yearly city fire inspection. Other: Fluorescent bulbs are stored in a four-foot fiberboard drum on site and brought to a recycling site by the retrofit company. Batteries are collected on site and disposed of via Retrofit Recycling.**
4. Other measures taken to reduce solid waste and hazardous waste, use recycled materials, and properly dispose of hazardous materials, including electronic devices. **All electric and electronic devices are packed at the district level and disposed in a responsible manner through contracted companies such as Retrofit Company. Paper towels used throughout the building are post-consumer recycled materials. Materials needed for paper towel and soap dispensers are 100% recyclable including shipping packaging and waste after completely used. Hand towels and rags used in food service, custodial and health office are laundered on site and reused. Food service uses reusable, washable trays. Food service waste of fruits and vegetables is fed to onsite animals (chickens, reptiles, etc.).**

Pillar 1 - Element D: Use of alternative transportation

1. Percentage of your students who walk, bike, bus or carpool (two or more students in the car). How is this data calculated? ***Anecdotal data combined with data from transportation leads us to declare approximately 95% of our population either walk, bike, bus or carpool to school.***
2. Has your school implemented any of the following?
 - Vehicle loading/unloading areas are at least 25 feet from building air intakes, doors and windows. **Yes**
 - pRoutes to school or Safe Routes to School **Not formally**
3. Describe activities in your safe routes program and other events to encourage students to walk, bike or carpool, including number of participants. ***Neither of these formal processes are used; however, we utilize Golden Valley Police Officers to determine safe routes of our walkers and bikers (weather permitting this number is approximately 24) as well our parent drop off lines (approximately 100 students are dropped off and picked up each day). The Golden Valley Police Officers train student patrols who patrol safe routes each day for walkers and bikers.***
4. Describe how your school transportation use is efficient and has reduced its environmental impact. ***We work with the busing service, district, and families to be as efficient as possible with routes and student load. Routes are electronically monitored and analyzed on a regular basis to determine efficiency with changes made accordingly. To do this, we combine with a second elementary school which does not occur in any other elementary school within the district.***
5. Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships. ***We provide bike racks for student use. Additionally, we work with the Golden Valley Police to determine the safest routes for students who walk to and from school. GV Police then work with administrative staff and train students to patrol walkways and streets to ensure the safety of students who walk.***

Pillar 2 - Element A: Improve the health and wellness of students and staff

1. Describe your school's Integrated Pest Management (IPM) efforts. ***A company is hired for IPM and visits site monthly submitting reports to district building and grounds. Spraying or baiting occurs only as needed ensuring all safety and guidelines are followed. Live animal capture happens with bait traps.***
2. Which of the following practices does your school employ to minimize exposure to hazardous contaminants?
 - ***We focus on asthma control and indoor air quality with HEPA filtered vacuums for carpet cleaning and high rated MERV filters (8 to 15) for air handling units. We have a low percentage of carpeted areas to reduce air quality issues from mold, dirt and asthma.***
 - ***The administrative process is to reduce, remove and prohibit elemental mercury in our building.***
 - ***Daily operations are checked for safety of boilers. Boilers are cleaned and state inspected yearly.***
 - ***The district does a complete radon testing protocol every five years.***
 - ***We have an on staff licensed asbestos inspector and asbestos site supervisor allowing us immediate response to issues should they arise.***

- ***Prior to work, painted/glazed surfaces are lead tested. If found, remediated to EPA/MDH standard***
 - ***We have no wood playground or structures that contain chromate copper arsenate.***
 - ***All kiln and kitchen exhaust hoods, as well as bathroom exhaust fans are kept in working order.***
3. Describe how your school controls and manages chemicals routinely used in the school to minimize student and staff exposure. ***Chemicals are properly stored and locked according to MPCA guidelines. Gasoline and paint are stored in fireproof cabinet. The boiler room is locked. Any staff who need to use any chemical on site is trained and uses personal protective equipment.***
 4. Which green cleaning custodial service is used? ***ISSA Cleaning industry management standard is used however not as a green cleaning custodial service.***
 5. Describe actions your school takes to control moisture from leaks, condensation, and excess humidity and promptly clean up mold or remove moldy materials when it is found. ***School is visually inspected daily. If something cannot be fixed on site, an electronic work order system is used for district personnel or outside support to be called in for remediation. Doors and windows are inspected yearly and re-sealed as needed. The building has a roof leak log. Dehumidifying with HVAC building system removes condensation and excess humidity. If necessary, mold is tested and remediated.***
 6. Describe actions your school takes to ensure that all classrooms and other spaces are adequately ventilated with outside air, consistent with state or local codes, or national ventilation standards. Describe your school's practices for inspecting and maintaining the building's ventilation system and all unit ventilators to ensure they are clean and operating properly. ***All of this is overseen by our energy management system, which is a computer driven application that runs all the equipment monitoring and ensuring that we always meet all requirements. All HVAC units are inspected daily, filters inspected and changed quarterly or as needed, anything needed to be fixed is repaired in house or third party in a timely manner. Preventative maintenance is practiced on all equipment along with daily monitoring.***
 7. Describe the steps your school takes to protect indoor environmental quality, such as access to daylight, lighting quality, views to nature, acoustics, thermal comfort, etc. ***Each classroom has at least two large windows with several classrooms having more. With access to so much sunlight, especially those classrooms located on the second floor, most teachers do not turn on the fluorescent lights due to adequate natural lighting. Thermal comfort and acoustics are managed by the HVAC management system. Lighting quality is to code with the required number of lumens per space.***
 8. Describe any other actions your school takes to manage indoor environmental hazards. ***Hazardous materials include PCB ballasts, fluorescent lights, batteries, solvents, chemicals, electronic waste recycling in compliance with employee right to know standards. Kitchen exhaust fans for removing humidity and odors from cooking.***

Pillar 2 - Element B Integrated school environmental health program

1. Which practices does your school employ to promote nutrition, physical activity and overall school health?
 - Our school participates in a Farm to School program to use local, fresh food. **Yes**
 - Our school has a fruit, vegetables and greens salad bar. **Yes**

- Our school has an on-site food garden. **Yes**
 - Food purchased by our school is certified as "environmentally preferable". Percentage: **5-10%** Type: ***The Good Acre roasted vegetables***
 - Our students spent at least 120 minutes per week over the past year in school supervised physical education. ***Yes - students receive a combined 210 minutes of weekly structured physical education and unstructured recess time.***
 - At least 50 percent of our students' annual physical education takes place outdoors. **Yes**
 - Health measures are integrated into assessments. ***Intermediate aged students partake in health-related physical fitness tests. Students are taught how to set measurable and attainable health related physical fitness goals in cardiovascular endurance, muscular strength, muscular endurance, and flexibility.***
2. Describe the type of outdoor learning activities, exercise and recreation available
- ***Chickadee Landing - Chickadee Landing is a designated bird observation area protected by trees or shrubs where students feed birds during the winter months.***
 - ***School Forest - We partner with the MN DNR to manage a 1.7-acre plot of forest on our grounds.***
 - ***Native Prairie Patch - Approximately 800 sq. ft. Students collect seeds in the fall, plant and grow seedlings in the greenhouse and transfer to the school grounds and their homes in the spring.***
 - ***Native Butterfly Garden - Approximately 800 sq. ft. Students collect seeds in the fall, plant and grow seedlings in the greenhouse and transfer to the school grounds and their homes.***
 - ***Chicken Coop/Run - On site is a 60 sq. ft chicken run and coop for four hens. Students take care of the chickens with daily feedings/watering, checking the health of each bird and collecting eggs.***
 - ***Pumpkin Patch and Sunflower Garden - Approximately 1000 sq. ft. Students study the life cycle of pumpkins and sunflowers planted in the spring and harvested in the fall.***
 - ***Tulip Beds - Each of the three kindergarten classes has a designed tulip bed where bulbs are planted in the fall and growth is intensively observed in the spring.***
 - ***Fruit Orchard - Thirty fruit trees were planted in the spring of 2019 which allowed students to understand the flowering to fruit process and fruit was collected in the fall.***
 - ***Raised vegetable gardens - On site are five raised bed gardens where students plant beans and root vegetables in the spring and harvest in the fall.***
 - ***Greenhouse - On site is a 10' x 16' greenhouse used primarily in the spring to grow harvested seed from the various native gardens on site as well as vegetables for onsite raised beds.***
 - ***Hampshire Park - Down the road is a city park with natural and man-made wetlands. Students participate in focused observations and explorations to understand these areas and importance.***
 - ***Wildwood Park - Adjacent to the school is a natural area where students conduct nature-focused experiments, observations and explorations here.***
 - ***Bluebird Houses - Located around the school campus are bluebird houses managed by students and staff and used for observational purposes of the bird's life cycle.***
3. Describe any other efforts to improve nutrition and fitness, highlighting innovative or unique practices and partnerships.
- ***Fuel Up to Play 60 - FUTP 60 is an in-school health and wellness program launched by the NFL, National Dairy Council, and USDA with the primary focus to help schools meet wellness goals. MN Vikings have been to our site several times to celebrate our successes with FUTP 60.***

- **Step to It Challenge** - *Step to It is challenge that motivates for increased physical activity. MN Twins baseball team has visited us numerous times celebrating our success with the program.*
- **Playground** - *In partnership with the City of Golden Valley and County's Youth Sports Grant, we designed and built a playground located on city property across the driveway from the school.*
- **Unique Physical Education focus** - *As a STEAM-focused magnet school, our physical education team integrates core content area into most lessons. For example, instead of having a regular obstacle course, students participate in 'Jungle Tag' where not only do they need to showcase physical prowess, but also academic knowledge of predator/prey relationships.*
- **District Wide Sports Night** - *Our district holds an annual sports competition between elementary schools. We frequently win blue ribbons in the multiple jump roping competitions.*
- **Staff Step it Up Challenge** - *Our district used to hold a yearly challenge focused on staff fitness. We were a multiple year winner as staff encouraged each other and exercised together.*
- **Staff Yoga** - *Starting in the 18-19 school year, staff practiced yoga together once a week during the winter and spring months led by a school parent who is a certified yoga teacher.*
- **Try It** - *Our district's school nutrition program provides 'Try It' opportunities for students where they can try a fruit or vegetable or other healthy food that they may have not yet been exposed to. Recipes are included and sent home allowing families to experience the 'Try It' also.*
- **Girls on the Run** - *This program, run by teacher volunteers, focuses not just on running, but also on building social, emotional and physical skills in girls while encouraging healthy habits for life.*

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

1. Does your school use a Coordinated School Health approach or other health-related initiatives to address overall school health issues? **Yes**
 - **CounterAct** - *Our 5th grade students participate in the CounterAct Program facilitated by Golden Valley police officers. This program promotes healthy living as well as information on chemical substances and advocacy to just say no to chemical substances.*
 - **Daily Breakfast Program** - *Each of our Kindergarten students can receive a free breakfast. In addition, free or reduced breakfast for students who receive free or reduced lunch and breakfast for full price to any other student is also provided as an option.*
 - **Healthy Food Alternatives** - *We do not celebrate with treats and encourage all snacks and lunches brought from home to be filled with healthy foods.*
 - **Resources for Families** - *We provide immunization, vision and dental resources to families as well as resources for public and mental health. We have a social worker, a psychologist and equity specialist on staff and outsource with a local company to have a School Linked therapist on site.*
 - **Fuel Up to Play 60** - *Students actively participate in the NFL FUTP 60 program. Student leaders and the teacher advisor encourage students to be physically active through "Jammin' minute" videos on the morning 'news', and posters and announcements in the classrooms.*
 - **Step to It Challenge** - *Students, staff and families sign up for the annual Hennepin County Step to It Challenge. This challenge advocates for active lifestyle by daily monitoring of steps. We have won the school challenge four years.*
 - **Allergy Awareness** - *Our nurse provides awareness of allergies within the building. Signs are posted outside of classrooms where students with severe allergies spend time and peanut free tables in the cafeteria are*

offered. School nutrition services provide alternative options for students needing peanut-free, dairy-free or gluten-free foods.

- ***Mindfulness - Many teachers provide movement brain breaks every 15-30 minutes as well as teaching breathing techniques for calm and focus. We teach children how their brain works, functions and grows for them to understand mindsets.***
2. Does your school partner with any postsecondary institutions, businesses, nonprofit organizations, or community groups to support student health and/or safety? **Yes.**
- ***CounterAct - Our 5th grade students all participate in the Project Program facilitated by Golden Valley police officers. This program promotes healthy living as well as information on chemical substances and advocacy to just say no to chemical substances.***
 - ***Community Speakers - Local EMT, Firefighters, Doctors and Dentists speak to students throughout the school year on safety, health and their careers.***
 - ***Calvary Lutheran Church - This church provides donations of food, winter hats and mittens/gloves to students in need.***
 - ***Adult volunteers - We have about a dozen adults who volunteer with students on a one-to-one basis or in small groups on academic work. This support boosts self-esteem of students.***
3. Does your school have a school nurse and/or a school-based health center? **Yes**
4. Describe your school's efforts to support student mental health and school climate
- ***Positive Behavior Intervention and Supports (PBIS) - The school community works collaboratively to create expectations, practice them and follow through with consequences - both good and not so good depending upon choices. Students are acknowledged and celebrated weekly as a school community for exhibiting positive behaviors with themselves, towards others and the world.***
 - ***CHAMPS Classroom Management - The school community utilizes the CHAMPS Classroom Management system to develop an instructional structure in which students are responsible, motivated, and highly engaged in specific tasks.***
 - ***Weekly Child Study - A team comprised of administration, school nurse, social worker, psychiatrist and staff depending upon need meet weekly to discuss students of concern and create a plan of evaluation or reevaluation for services. This plan is communicated with parents.***
 - ***Multiple Tier Support System (MTSS) - A team comprised of administration, teachers, and specialized staff meet weekly to discuss students brought to the group by classroom teachers to create a plan to support social/emotional, behavioral and/or academic needs.***
 - ***Buddy Classrooms - Each primary grade classroom is paired with an intermediate grade classroom to participate in various activities focused on academics, outdoors and fun. This unique mentorship builds a culture of family in the building as students learn from one another.***
 - ***Seeds for Science - Members of one of our high schools' volunteer weekly to teach designated science/environmental focused lessons to each classroom throughout the school year.***
 - ***SEA Buddies - Members of one of our high schools' volunteer weekly with students to assist with academic needs. This one-on-one mentorship allows growth and support that a classroom teacher might not otherwise be able to provide.***

- ***Junior Naturalists*** - Elected members from 3rd, 4th and 5th grade work daily to encourage and educate the school on recycling, energy consumption and other sustainability practices. These students teach others about the schoolyard chickens, gardens, school forest and orchard.
- ***Student Council*** - Elected members from 3rd, 4th and 5th grade work daily to create a culture of success and belonging throughout the building. These leaders oversee service learning.
- ***Anti-Bully Month and Run*** - In October, staff teach the difference between being mean, rude and a bully and how to handle each situation. The end of the month culminates in themed days, such as Mix-Match Socks to Stomp Out Bullying, leading up to a whole school anti-bully run.
- ***Classroom meetings*** - Classroom teachers hold daily morning meetings as a community check in to build friendships, empathy and understanding amongst one another.
- ***Classroom greeters*** - Several classrooms have daily designated students to provide specific greetings chosen by classmates upon entry into the classroom each morning.
- ***SEA News*** - Our media specialist advises small groups of students to create daily news and announcement episodes for the SEA News channel.
- ***All School Assemblies*** - All school assemblies are held throughout the school year focusing on various topics including anti-bullying and student successes.

Pillar 3 - Element A: Interdisciplinary learning about the key relationships between dynamic environmental, energy and human systems

Which practices does your school employ to help ensure effective environmental and sustainability education? Explain with specific examples of actions taken, highlighting innovative or unique practices and partnerships.

- Our school has an environmental or sustainability literacy requirement beyond state academic standards and graduation requirements. ***YES, At the School of Engineering and Arts, students are exposed to environmental and sustainability literacy on day one of each school year as they participate in a recycling/composting lesson to prepare them for sorting lunch waste later in the day. Students frequently spend time outdoors, not only for recess and physical education, but also for free outdoor play and focused environmental lessons. Starting in Kindergarten students record observations and analyze data in 'SEA Notebooks', a science notebook of sorts for core content integration documentation. Our media center and classroom libraries are filled with books, both non-fiction and fiction, focused on environmental and sustainability topics. Students are encouraged to make observations, ask questions and celebrate wonder.***
- Environmental and sustainability concepts are integrated throughout the curriculum. ***YES Core content integration is the key to success in our school. Teachers have been trained in both national and state focused environmental curriculum as evident in grade level curriculum maps where Outdoor Learning has a prominent feature for each unit of study. In addition, the MN Weatherguide Calendars are posted and utilized in each classroom as a point of conversation inciting observation and data analysis on all things weather and water related in addition to regular calendar focused conversation. Sound mapping in the school forest occurs with the music teacher, predator prey hide and seek games occur with the physical education teacher and scientific sketches in nature are facilitated by the art teacher. Additionally, field experiences occur in locations we are not able to provide to students onsite - such as at a local nature center where students study the habitat of three different biomes or the MN Landscape Arboretum where students can actively compare and contrast plants from diverse ecosystems. We provide unique learning experiences for our students focused on the environment. These include week long residencies at Como Zoo, overnight excursions to the science museum, biomonitoring a local Creek by collecting macros, recording and reporting data to our Watershed District, raising 300 trout each year with the MN Trout in the Classroom Program, working***

alongside MN DNR Forester on the management of our school forest, and so much more. Environmental and sustainability concepts are interwoven throughout our daily curriculum.

- *Environmental and sustainability concepts are integrated into assessments. YES, while environmental and sustainability concepts might not always be directly tied into assessments at all grade levels, it is widely apparent that our students are successful on assessments due to their time in nature and their core understanding of environmental and sustainability concepts. This is quite evident in our yearly MN Comprehensive Assessments (MCA) in both math and science. In math our students continually score high in data analysis which is not common for elementary students. We know this is due in part to the continual observation, questioning, and analyzing students do outdoors. Additionally, our students continually rank as one of the highest scoring schools on the science MCA year after year. We know this is because they experience the environment and put into action sustainable practices and not just read a book or watch a video about them.*
- *Professional development in environmental and sustainability education is provided to all teachers. YES, each year focus on the outdoors and environmental and sustainability education is part of the required staff professional development. Partnering with such agencies as MN DNR, Project Learning Tree, National Fisheries and Wildlife and Three Rivers Park System has provided experiences in the outdoors focusing on core content integration and the building of self-knowledge for our staff. Additionally, our staff have facilitated professional development for others wanting more knowledge and experience on environmental and sustainability education. This has happened at both state-wide conferences and district-wide trainings. All this combined, creates competent and confident teachers willing to take students outdoors and delve into environmental and sustainability education.*
- *Environmental courses, such as Advanced Placement (AP) Environmental Science. Not applicable as we are an elementary school.*
- *Before- and after-school programs, summer activities and other enrichment programs teaching environment or sustainability concepts. These could include childcare programs, community education courses, parent education courses, and student green teams, environmental or outdoor clubs. YES*
 - *Junior Naturalist Program - This is a student leadership opportunity for 3rd, 4th and 5th grade students. These students are elected into the program and provide educational opportunities to the whole school community on the gardens, greenhouse, chickens, recycling, composting, and so much more. This program empowers students to be advocates for the environment and stewards for sustainable practices.*
 - *Lego Robotics Program - We collaborate with First Lego League where the primary challenge for the past five years has focused on an environmental and/or sustainability issue. Students are posed with the challenge and must create and design solutions to the environmental and/or sustainability issues. These students in-turn educate classmates and staff on their new learnings and solutions.*
 - *Adventure Club - Our before and after school program incorporates environmental and sustainability concepts into their programming via time outdoors, exploration with the various animals throughout the building (building empathy with the environment), planting and garden maintenance, and student-led activities.*
 - *PTA meeting presentations - Our very active Parent-Teacher Association (PTA), seeks out presenters to keep them abreast of various relevant topics throughout the years. In the past, we have had such organizations as the Jeffers Foundation attend to teach parents how to take their children outdoors more often.*
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Pillar 3 - Element B: Use of the environment and sustainability to develop STEM content, knowledge, and thinking skills

Describe how your school uses sustainability and the environment as a context for learning science, technology, engineering and mathematics thinking skills and content knowledge? (Don't just describe your science or STEM programs.) ***We recognize the best place to learn about the environment and develop empathy to advocate for sustainability is the out-of-doors. Teachers are frequently found outdoors teaching required core content in math, language arts, music, art, physical education and science combined with outdoor experiences. If not outdoors, we work to teach students about life with the numerous in-house animals and plants. Students are the primary caretakers of these living creatures allowing the opportunity to develop empathy and connection which as research shows is the main element in which to develop environmental literacy. Our school is a STEAM-focused magnet elementary meaning each grade level infuses science, technology, engineering and mathematical thinking and content knowledge into every aspect of our daily schedule. A key aspect we work to embed in most everything are practices of science and engineering, particularly observation and questioning. We encourage questioning by our children and strive to ensure their voice is the primary one heard during instruction and learning. Through this Socratic-type teaching style, we ensure students are developing critical thinking and problem-solving skills and not just sitting through rote memorization lectures. Additionally, we work to develop students' spatial awareness and visual literacy. This is important for STEAM, the environment and sustainability as it allows children to develop the sense and need for a variety of perspectives. We strive to educate our children for the unknown and prepare them for a world in which we have no idea what careers they might have. We educate our children about different types of pollution, climate change and how our choices as consumers and producers impact the Earth. An example of such learning includes an all-school inspirational speaker, Wally Funk, who challenged students to imagine and design technology to aid in the cleanup of 'space junk'. This practice and new information allowed all of us to think about our human impact beyond our own planet. Another example occurs in the raising of Brown Trout from hatch to release. Students learn about these delicate indicator species all the while creating questions through observations. Students then conduct investigations focusing on water quality with Aquaponics. We strive to help our students make connections in all they study and ensure the perspective of the greater world as they do so.***

Pillar 3 - Element C: Development and application of civic knowledge and skills

1. Describe students' civic/community engagement projects integrating environment and sustainability topics.
 - ***Bassett Creek: 4th grade students twice yearly, once in the fall and again in the spring, volunteer with Hennepin County's RiverWatch Program through the biomonitoring and health assessment of Bassett Creek, a local waterway. We are one of the few, if not the only, elementary group that works with Hennepin County in this capacity.***
 - ***Trout in the Classroom - 5th grade students, through partnership with the Trout in the Classroom Program, Trout Unlimited and the MN DNR, hatch and raise approximately 300 trout eggs from December to May when fingerlings are released in a designated area trout stream. Students learn high level chemistry and biology and apply this to teaching of content as they educate the whole school community, including families, on trout being indicator species of habitat.***
 - ***School Forest management - K-5 students and staff work in collaboration with a MN DNR Forester on the stewardship and management of our designated 1.7-acre school forest. Students learn of invasive species and their management all the while working to rebuild native plant population.***
 - ***Fruit Orchard - K-5 students and staff work in collaboration with Hennepin County Foresters to maintain a 30-acre fruit orchard and educate the surrounding community of the trees.***

- ***Junior Naturalists*** - Twice weekly, Junior Naturalists visit each classroom/office throughout the building checking to make sure that energy usage is as it should be (monitors off if not in use, lights off if nobody in the classroom) and proper recycling is in place. Should the students find mistakes, they leave feedback notes for corrective action.
 - ***Boy and Girl Scouts*** - Within our student community, we have 5-7 boy and girlscout troops led by parent volunteers each year. These students work within our gardens, aid in recycling and composting and educate students on sustainable practices. In addition, many Eagle Scout and Gold Award candidates have completed tasks within our school grounds focusing on enhancing the grounds to be conducive and safe for outdoor learning.
2. Describe how your school use sustainability and the environment as a context for learning green technologies and career pathways.
- ***Much of our instruction with green technologies and career pathways has occurred with the content of science instruction; however, as a STEAM-focused school, science is integrated into all core content areas so students are learning of such topics in multiple facets throughout their day, school year and tenure at our school. Students learn and apply information on such topics as alternative energy sources as they design and create with solar energy and circuitry as well as within the lens of earth materials as students investigate sedimentation and erosion impact.***
 - ***During their time at SEA, students learn from multiple environmental professionals. Professionals from whom our students have learned from include MN DNR Foresters, Fisheries, Invasive Specialists and Conservation Officers; National Park Rangers and Interpretive Naturalists, Three River Park Naturalists, State Park Rangers and Interpretive Naturalists, Zookeepers, and numerous scientists and engineers with a broad smattering of green career focuses.***
 - ***In addition to learning from professionals in environmental careers, students attend environmentally focused field trips multiple times each of their school years with rarely a repeat to a visit during their six-year tenure. Such locations include Mississippi River National Park for the Working Field Trip where students studied locks, dams and alternative energies, numerous Three River Parks, MN Arboretum, Como Zoo, MN Zoo, MN Twins Stadium Green Tour, Science Museum, Target HQ, and related locations.***