



U.S. Department of Education Green Ribbon Schools 2013

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For Public Schools only: [ ] Charter [ ] Title I [X] Magnet [ ] Choice

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

Official School Name King Science and Technology  
(As it should appear in the official records)

School  
Mailing Address 3720 Florence Boulevard  
(If address is P.O. Box, also include street address.)

City Omaha State NE Zip 68110

County Douglas State School Code Number 0001

Telephone (402 ) 557-3720 Fax (402 ) 557-4459

Web site/URL www.ops.org/middle/kingscienc E-mail Kristine.denton@ops.org

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

  
Date 2/13/13  
(Principal's Signature)

Name of Superintendent\* Dr. Virginia Moon  
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name\* Omaha Public Schools Tel. (402)557-2222

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate. This is one of the highest performing green schools in my jurisdiction.

  
Date 2-13-13  
(Superintendent's Signature)

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



## 2013 NEBRASKA APPLICATION

Thank you for your interest in completing the Nebraska application for nomination to U.S. Department of Education Green Ribbon Schools (ED-GRS). In order to complete this application, you will need to collect data about your school's facility, health and safety policies; food service; and environmental and sustainability curriculum.

ED-GRS recognizes schools taking a comprehensive approach to greening their school. A comprehensive approach incorporates environmental learning with improving environmental and health impacts. Becoming a U.S. Department of Education Green Ribbon School is a two-step process. The first step is to complete and submit this form to be selected as a nominee by an eligible nominating authority. The second step of the process requires signatures for the nominee package that will be sent to the U.S. Department of Education (ED).

ED selects honorees from those presented by eligible nominating authorities nationwide. Selection will be based on documentation of the applicant's high achievement in the three ED-GRS Pillars:

Pillar I: Reduce environmental impact and costs.

Pillar II: Improve the health and wellness of students and staff.

Pillar III: Provide effective environmental and sustainability education, incorporating STEM, civic skills and green career pathways.

Schools demonstrating exemplary achievement in all three Pillars will receive highest rankings. It is important to document concrete achievement. It will help you to assemble a team to complete the application. This team might include: a facilities manager, physical education director, food services director, curriculum director, finance department representatives, teachers and students. You should consult the ED-GRS [resources page](#) for standards, programs and grants related to each Pillar, Element and question. This is an excellent clearinghouse of resources for all schools, not just those who apply.

The questions in this application will help you demonstrate your high achievement in these Pillars as well as provide space for you to include pertinent documentation. You will receive points when you provide documentation for your answers. **Applications are due by February 1, 2013. Mail an original and three copies to:**

**Jim Woodland  
Nebraska Department of Education  
301 Centennial Mall South  
Lincoln, NE 68509-4987  
ATTN: GRS**

**NOTE:** If selected for nomination to ED-GRS, the school principal and district superintendent must be prepared to certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true; however, 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 one or more of grades K-12. (Schools on the same campus with one principal, even a K-12 school, must apply as an entire school.)
2. The school has been evaluated and selected from among schools within the Nominating Authority's jurisdiction as 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. 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.
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.

School Contact Information

School Name: King Science & Technology Magnet Center

Street Address: 3720 Florence Boulevard

City: Omaha State: NE Zip: 68110

Website: www.ops.org/middle/kingscience Facebook page: \_\_\_\_\_

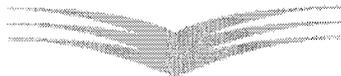
Principal Name: Stephen Eubanks

Principal Email Address: Stephen.eubanks.ops.org Phone Number (with area code): 402-557-3720

Lead Applicant Name (if different): Kristine Denton

Lead Applicant Email: Kristine.denton@ops.org Phone Number (with area code): 402-557-3720

# GreenRibbonSchools



<b>Level</b> <input type="checkbox"/> Elementary (PK - 5 or 6) <input type="checkbox"/> K - 8 <input checked="" type="checkbox"/> Middle (6 - 8 or 9) <input type="checkbox"/> High (9 or 10 - 12)	<b>School Type</b> <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private/Independent <input type="checkbox"/> Charter	<b>How would you describe your school?</b> <input checked="" type="checkbox"/> Urban <input type="checkbox"/> Suburban <input type="checkbox"/> Rural	<b>District Name</b> Omaha Public Schools <input type="checkbox"/> Largest 50 Districts
			Total Enrolled: <u>532</u>
Does your school serve 40% or more students from disadvantaged households?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	% receiving FRPL <u>71%</u> % limited English proficient <u>1%</u> Other measures _____		Graduation rate: <u>n/a</u> Attendance rate: <u>95%</u>

Application Outline:

ED-GRS Pillars and Elements	Points
Cross-Cutting Question: Participation in green school programs	5 Points
<b>Pillar I: Reduce environmental impact and costs: 30%</b>	
Element 1A: Reduced or eliminated greenhouse gas (GHG) emissions Energy Buildings	15 Points
Element 1B: Improved water quality, efficiency, and conservation Water Grounds	5 Points
Element 1C: Reduced waste production Waste 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 school environmental health program Integrated Pest Management      Indoor air quality Contaminant controls and Ventilation      Moisture control Asthma control      Chemical management	15 Points
Element 2B: Nutrition and fitness Fitness and outdoor time Food and Nutrition	15 Points
<b>Pillar III: Provide effective environmental and sustainability education, incorporating STEM, civic skills and green career pathways: 35%</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	10 Points
<b>Total</b>	<b>100 Points</b>

Green Ribbon Schools Award  
King Science & Technology Magnet Center  
Summary Narrative

King Science & Technology Magnet Center has made a conscious effort to become more aware of the impact our decisions make on our environment.

Through district support, our building has reduced greenhouse gas emissions and has improved our indoor air quality. The OPS Transportation department has rerouted bus pick ups and drop offs which has a direct impact on our school since nearly  $\frac{3}{4}$  of our students ride a bus. The hazardous waste management by the district and maintenance of the school's ventilation system ensures we are in line with national protocols.

The students of King Science lead the effort to ensure environmental awareness. The Green Club within the Service Learning and Science Scholars courses weekly gather recyclables from the classrooms and track the school's waste. We have a courtyard maintained by the students that contains native plants and is a haven for butterflies and an annually returning mallard duck family. The Urban Farm in the back of our school has been designed, built, and maintained by students. Crops are harvested and used to teach students about plant growth, gardening, and healthy eating. The school also maintains two innovative aquaponic systems that allow for harvesting of produce throughout the year. The system utilizes the technology of using tilapia waste to provide nutrients to a soilless grow bed. This technology allows for the harvesting of plants every 4-6 weeks. All produce is donated to local food banks. The students also manage seedlings that are then planted in other aquaponic systems at the Solomon Girls Center and Lothrop Elementary. Students working closely with the aquaponic system are also responsible for teaching elementary students about the technology and lead educational field trips to King Science. Within the I<sup>3</sup> and I<sup>2</sup> classes, students learn about wind energy and other sources of alternative fuel. Students also volunteer time to clean up Kountze Park, a park across the street from the school that King Science has officially adopted from the city of Omaha.

King Science participates in monthly Fitness Fridays where students and staff are actively engaged in a healthy activity relating to heart rate management, healthy food choices, to yoga, and Olympic events. We offer exploratory classes in healthy brain workouts, morning fitness groups, lifetime fitness, and archery. Our sixth graders attend an outdoor overnight camp to the Nebraska 4H camp where they hike, fish, compete in archery, and engage in outdoor games. All students are enrolled in a physical education class that meets for 45 minutes every other day. Weather permitting, these classes are held outdoors on our track and field. Part of the district approved curriculum for physical education calls for the monitoring of a healthy weight and maintaining a physically active lifestyle. We offer club sports (soccer, swimming, basketball, and football) to our 5<sup>th</sup> and 6<sup>th</sup> grade students and competitive sports to our 7<sup>th</sup> and 8<sup>th</sup> graders (volley ball, cross country, track, soccer, swimming, wrestling, basketball, and football).

At King Science we believe that the involvement of the community is vital to providing students with a well-rounded understanding of their environment. We partner with the non-profit organization Whispering Roots to maintain the aquaponic system. Mary Beth Butts, a volunteer gardener, works closely with our after school program in maintaining the Urban Farm. When developing and building the farm, we worked with engineering students from Omaha North High to design the layout and help build the raised beds. During our annual SET for Life Conference, an event where all students attend informational sessions regarding science, engineering, technology, and future educational opportunities, students learned about health issues like the

adverse affects on the brain from drug use, jobs available in civil engineering, and what types of careers are available in agriculture. These sessions are lead by guest speakers to our school.

The students and staff at King Science are committed to expanding their understanding of the impact their decisions make on the environment and on pursuing ways to promote a healthy lifestyle. Students are excited to be a part of the process of improving their environment, whether from a local or global aspect.



*Summary Narrative:* Provide an 800 word maximum narrative describing your school's efforts to reduce environmental impact and costs; improve student and staff health; and provide effective environmental and sustainability education. Focus on unique and innovative practices and partnerships.

1. Is your school participating in a local, state or national school program which asks you to benchmark progress in some fashion in any or all of the Pillars?

Yes  No Program(s) and level(s) achieved:

OPS Green Schools Initiative, benchmarking Energy, Waste & Recycling, Paper use, Water and Green teams

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

Yes  No Award(s) and year(s) Energy Star Award 2012; OPS EPA National Excellence Award for Indoor Air Quality 2006; EPA Model of Sustained Excellence Award for Indoor Air Quality 2009.

## Pillar I: Reduced Environmental Impact and Costs

### Energy

1. Can your school demonstrate a reduction in Greenhouse Gas emissions?

Yes  No Percentage reduction: 13.7% over (m/yyyy - m/yyyy): December 2012-September 2012

- Initial GHG emissions rate (MT eCO<sub>2</sub>/person): Total Direct & Indirect MT eCO<sub>2</sub> year ended Dec 2010 = 2.32 MT eCO<sub>2</sub> per person

- Final GHG emissions rate (MT eCO<sub>2</sub>/person): Total Direct & Indirect MT eCO<sub>2</sub> = 2.28 MT eCO<sub>2</sub> per person

Offsets: No offsets How did you calculate the reduction? Reduction calculated by total reduction in MT eCO<sub>2</sub>.

2. Has your school received EPA ENERGY STAR certification or does it meet the requirements for ENERGY STAR certification?

Yes  No Year(s) and score(s) received: Energy Star 2012

3. Has your school reduced its total non-transportation energy use from an initial baseline? ( X ) Yes ( ) No

Current energy usage (kBTU/student/year): 38,419 Source kBTU/student/year

Current energy usage (kBTU/sq. ft./year): 140.7 Source kBTU/sq ft./year

Percentage reduction: 14% over (m/yyyy - mm/yyyy): December 2010-September 2012



How did you document this reduction?

Using Energy Star

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

On-site renewable energy generation: none Type \_\_\_\_\_

Purchased renewable energy: none Type \_\_\_\_\_

Participation in USDA Fuel for Schools, DOE Wind for Schools or other federal or state school energy program:

n/a

5. In what year was your school originally constructed? Originally constructed in 1959.

What is the total building area of your school? 154,223 square feet

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

For new building(s): Percentage building area that meets green building standards: \_\_\_\_\_

Certification and level: \_\_\_\_\_ Total constructed area: \_\_\_\_\_

For renovated building(s): Percentage of the building area that meets green building standards: \_\_\_\_\_

Certification and level: \_\_\_\_\_ Total renovated area: \_\_\_\_\_

### *Water and Grounds*

7. Can you demonstrate a reduction in your school's total water consumption from an initial baseline?

Average Baseline water use (gallons per occupant): 6354 Gallons

Current water use (gallons per occupant): 6354 Gallons

Percentage reduction in domestic water use: No reduction

Percentage reduction in irrigation water use: No reduction

Time period measured (mm/yyyy - mm/yyyy): Data for year ending November 2012

How did you document this reduction (i.e., ENERGY STAR Portfolio Manager, utility bills, school district reports)? Utility bills

8. What percentage of your landscaping is considered water-efficient and/or regionally appropriate? 80%

Types of plants used and location: Tall fescue blend grass throughout all lawn areas; Pin Oak trees, Maple, Sycamore trees around the perimeter of the building.

9. Describe alternate water sources used for irrigation. (50 words max)

n/a

10. Describe any efforts to reduce stormwater runoff and/or reduce impermeable surfaces. (50 words max)

Two experimental rain gathering troughs were built by students and placed near down spouts in the courtyard area.

11. Our school's drinking water comes from: (X) Municipal water source ( ) Well on school property

Other: \_\_\_\_\_

12. Describe how the water source is protected from potential contaminants. (50 words max)

The municipal water source, Omaha's Metropolitan Utilities District (MUD), provides water that meets or surpasses every federal and state requirement for safe drinking water. MUD uses chloramines in the water treatment process to kill bacteria.

13. Describe the program you have in place to control lead in drinking water. (50 words max)

Water was tested by the district in all schools in 1989 when the EPA mandated testing water coolers for lead. Testing was done to the first draw of water after a weekend when lead concentrations would be highest. Two water coolers were removed from services in OPS after testing.

14. What percentage of the school grounds are devoted to ecologically beneficial uses? (50 word max)

Approximately 20% of the square footage used by King Science is devoted to ecologically beneficial uses. The courtyard is filled with native Nebraska plants with the purpose of attracting local pollinators. The courtyard is also a safe haven for a family of mallard ducks that return annually to nest. Another portion of our school grounds has been converted to an urban farm that grows common vegetables and herbs.

#### Waste

15. What percentage of solid waste is diverted from landfilling or incinerating due to reduction, recycling and/or composting? Complete all the calculations below to receive points.

A - Monthly garbage service in cubic yards (garbage dumpster size(s) x number of collections per month x percentage full when emptied or collected): 135.3 cubic yards (assumed 100% full)

B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected): 23.5 cubic yards (assumed 100% full)

C - Monthly compostable materials volume(s) in cubic yards (food scrap/food soiled paper dumpster size(s) x number of collections per month x percentage full when emptied or collected): none

Recycling Rate =  $((B + C) \div (A + B + C) \times 100)$ : 14.8%



Monthly waste generated per person = (A/number of students and staff): 0.213 cubic yards/person

16. What percentage of your school's total office/classroom paper content is post-consumer material, fiber from forests certified as responsibly managed and/or chlorine-free? 35%

17. List the types and amounts of hazardous waste generated at your school:

Flammable Liquids n/a	Corrosive Liquids n/a	Toxics n/a	Mercury n/a	Other:

How is this measured? Using OPS Safety Protocols

How is hazardous waste disposal tracked? Using OPS Safety Protocols

Describe other measures taken to reduce solid waste and eliminate hazardous waste. (100 word max)

With regards to efforts to eliminate hazardous waste, OPS recycles waste as much a possible, employing methods like mercury reclamation (for industrial use). Whenever possible chemicals and chemical products are reused by another school in the district, rather than disposed of, processes are in place to facilitate reuse. Unwanted chemicals become hazardous waste when there is no other option but to dispose of the material. For example, latex paint is not considered hazardous until it is disposed of in a landfill.

18. Which green cleaning custodial standard is used? ISSA Cleaning Industry Management Standards

What percentage of all products is certified? 25%

What specific third party certified green cleaning product standard does your school use?

ISSA

*Alternative Transportation*

19. What percentage of your students walk, bike, bus, or carpool (2 + students in the car) to/from school? (Note if your school does not use school buses.) 70% ride the bus; 25% by vehicle; 5% walk or ride bikes

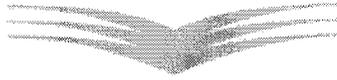
How is this data calculated? (50 word max)

Approximately 70% of the students attending King Science are considered "magnet" students and are eligible for transportation. Twenty-five buses are used daily with approximately 350 students using the service. Attendance is taken on the bus each afternoon.

20. Has your school implemented?

Designated carpool parking stalls

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- A well-publicized no idling policy that applies to all vehicles (including school buses)
- Vehicle loading/unloading areas are at least 25 feet from building air intakes, doors and windows
- Safe Pedestrian Routes to school or Safe Routes to School

Describe activities in your safe routes program: (50 word max)

OPS Transportation Division has well-documented School Bus Idling Procedures located within the Handbook for Transportation employees which is given to each student transportation driver. OPS transportation works to identify hazardous streets, number of students assigned to routes, and implementing a safe walk to school zone that is less than two blocks away from the school site.

21. Describe how your school transportation use is efficient and has reduced its environmental impact. (50 word max)

The district has school bus idling procedures in place to eliminate all unnecessary idling by district school buses. These procedures instruct that buses should be turned off for loading, unloading, while waiting for students off of school grounds (field trips, etc), in all cases except extreme weather. Buses do not start until all students have boarded and with the new OPS transportation routes being limited, there are more students assigned to routes than last year.

22. Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships. (100 word max)

Newly contracted buses will be used for the upcoming 2013-2014 school year. District wide approximately 434 of these buses will be liquid propane. Once in service, it is projected that OPS will have the largest school fleet of liquid propane buses in North America, and liquid propane buses certainly support the go green initiative.

## **Pillar II: Improve the health and wellness of students and staff**

### *Environmental Health*

1. What is the volume of your annual pesticide use (gal/student/year)? Describe efforts to reduce use:

One application of a pre-emergence herbicide in the start of the school year is utilized.

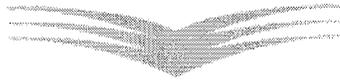
2. Which of the following practices does your school employ to minimize exposure to hazardous contaminants? Provide specific examples of actions taken for each checked practice.

Our school prohibits smoking on campus and in public school buses. Smoking is prohibited on district property (buildings and grounds) and on any OPS student transportation vehicle.

Our school has identified and properly removed sources of elemental mercury and prohibits its purchase and use in the school. Voluntary elimination of mercury policy since 1997.

Our school uses fuel-burning appliances and has taken steps to protect occupants from carbon monoxide (CO). Schools have CO monitors near any fuel burning appliances.

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Natural gas boilers and water heaters are located in a locked secured area and are inspected and serviced as prescribed by the manufacturer.

Our school does not have any fuel burning combustion appliances.

Our school has tested all frequently occupied rooms at or below ground level for radon gas and has fixed and retested all rooms with levels that tested at or above 4 pCi/L or our school was built with radon resistant construction features and tested to confirm levels below 4 pCi/L.

All frequently occupied rooms tested, with retesting after significant remodels or ventilation system changes.

Our school has identified any wood playground or other structures that contain chromate copper arsenate and has taken steps to eliminate exposure. Any landscaping lumber suspect to contain chromate copper arsenate is protected by polyurethane.

3. Describe how your school controls and manages chemicals routinely used in the school to minimize student and staff exposure. (100 word max)

The district provides our school with information, procedures and support to control and manage chemicals used. These tools include safety manuals/presentations, laboratory waste stream directions, inventory spreadsheets, disposal information, spill procedures and educational videos, as well as pick up services to recycle science lab chemicals, cleaning chemicals, art/other paints, and other chemicals. In addition to this written support and pick up service, there are individuals at the district level to answer any of our questions on managing chemicals. The overarching goal is to always try to substitute less toxic chemicals and to reuse chemicals when possible to avoid disposal.

4. Describe actions your school takes to prevent exposure to asthma triggers in and around the school. (100 word max)

Our school works to minimize or eliminate major asthma triggers such as second hand smoke, pollen and mold spores, dust mites, cockroaches, and animal dander. For example, smoking is prohibited; one-inch pleated filters are used in HVAC systems to reduce pollen and mold spores; mold remediation and prevention is a priority; indoor humidity is expected to be below 60% to minimize dust mites; an Integrated Pest Management Plan is being finalized, and other actions attempt to eliminate cockroaches; and any classroom pets are kept in cages with food in air tight containers.

5. Describe actions your school takes to control moisture from leaks, condensation and excess humidity and promptly cleanup mold or removes moldy materials when it is found. (100 word max)

Annual baseline reading of temperature, relative humidity and carbon dioxide are taken at each school, and additional IAQ baselines can be collected if requested. If the presence of mold is suspected but cannot be found, mold spore sampling may be performed. The district Environmental Department has specialized training to assess mold issues. Buildings engineers and custodians are trained to always look for water leaks and condensation and to work with the district Environmental Department to prevent mold growth in all schools. Any leaks or condensation is reported immediately and repairs are completed promptly to prevent mold growth if possible.

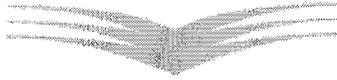
6. Our school has installed local exhaust systems for major airborne contaminant sources. (X) Yes ( ) No

The 2001 remodel included the installation of energy recovery units on the school's roof.

7. 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. (100 word max)

Custodial staff is responsible for changing filters on air handling units quarterly basis or more frequently if needed. The district heating, ventilation and air-conditioning (HVAC) technicians provide crucial technical support to

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determine the proper operation of all ventilation systems as needed. The HVAC technicians have also upgraded filter with a 6% efficiency rating to pleated filters with a 30% efficiency rating.

8. 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. (100 word max)

As a new school is designed or old school remodeled, architects and mechanical engineers work with district staff to ensure close adherence to the ASHRAE Ventilation Standard. Issues considered by the design team include the placement of outdoor air intakes; preferably away from loading docks, refuse containers, student drop off lanes, dedicated exhaust systems, interior relative humidity control and temperature control. The district HVAC technicians also recommend upgrades or retrofit systems to achieve ventilation rates and air quality in line with the current ASHRAE Ventilation standard.

9. Describe other steps your school takes to protect indoor environmental quality such as implementing EPA IAQ Tools for Schools and/or conducting other periodic, comprehensive inspections of the school facility to identify environmental health and safety issues and take corrective action. (200 word max)

The entire district uses the EPA's IAQ Tools for Schools to guide monitoring of indoor air quality, and in fact has been given two awards for its program – the EPA's National Excellence Award for Indoor Air Quality in 2006 and EPA's Model of Sustained Excellence Award for Indoor Air Quality in 2009. As mention above, annual baselines of indoor air are taken at each school, and efforts to earn ENERGY STAR awards further necessitate additional indoor air quality testing. With regards to environmental health, the district Environmental Department works with all schools regularly to assist with any corrective actions needed, and to educate building engineers and other staff on many environmental safety and related maintenance issues. With regards to other safety issues, the district Risk Safety Management Office works with all schools on training and corrective actions related to safety; including fire safety, occupational safety, traffic safety, extreme weather, playground and other safety issues.

## *Nutrition and Fitness*

10. Which practices does your school employ to promote nutrition, physical activity and overall school health? Provide specific examples of actions taken for each checked practice, focusing on innovative or unique practices and partnerships. (100 word max each)

Our school participates in the USDA's HeathierUS School Challenge. Level and year: \_\_\_\_\_

Our school participates in a Farm to School program to use local, fresh food.

Our school has an on-site food garden. Urban Farm and two Aquaponic Systems

Our school garden supplies food for our students in the cafeteria, a cooking or garden class or to the community.

Food donations are made to the Heartland of America Food Bank and the Salvation Army on 24<sup>th</sup> and Pratt Street every 4-6 weeks.

Our students spent at least 120 minutes per week over the past year in school supervised physical education.

All students receive 45 minutes every other day a physical education class. In addition, we offer athletic programming and practices year round to all grade levels of students.



At least 50% of our students' annual physical education takes place outdoors. Weather permitting, the physical education classes are conducted outside on the school's track and field.

Health measures are integrated into assessments. Part of the OPS Physical Education Curriculum requires that students are assessed for physical fitness and health measures.

At least 50% of our students have participated in the EPA's Sunwise (or equivalent program).

Food purchased by our school is certified as "environmentally preferable."

Percentage: \_\_\_\_\_ Type: \_\_\_\_\_

11. Describe the type of outdoor education, exercise and recreation available. (100 word max)

Weather permitting, our Physical Education classes meet outside on the schools track and field over 60% of the time. Athletic practices for cross county, track and field, football, and soccer meet outside. Out 6<sup>th</sup> graders attend an annual overnight camp at the Nebraska 4H Camp in Gretna where they complete nature hikes, field games, fishing, archery, and boating.

12. Describe any other efforts to improve nutrition and fitness, highlighting innovative or unique practices and partnerships. (100 word max)

King Science has a monthly Fitness Fridays where for 40 minutes, the entire school engages in a physical activity ranging from yoga to heart rate monitoring. The school also has Exploratory Classes that lead students in physical activities like brain breaks, AM Fitness, Surviving in the Wild, and Archery.

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

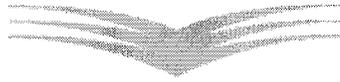
1. Which practices does your school employ to help ensure effective environmental and sustainability education? Provide specific examples of actions taken for each checked practice, highlighting innovative or unique practices and partnerships.

Our school has an environmental or sustainability literacy requirement. (200 word max)

State Science Standard SC8.3.3.g states that students will be able to identify positive and negative effects of natural and human activity on an ecosystem. Lessons used to teach this standard include teaching students about different types of energy sources and how environmental changes have long-term effects on ecosystems. During the annual trip to Fontenelle Forest, students learn how people in the past have left their trash along the Missouri River and how this has impacted the flow of water around the banks near the forest. Within the Service Learning and Science Scholars courses, students learn through citizenship science and weekly track the amount of waste produced in our building and then create advocacy campaigns to reduce the waste. In the 7<sup>th</sup> grade Service Learning course, students have learned about agricultural practices and now maintain two aquaponic systems that produce fresh vegetables and lettuce for donation to local food banks.

Environmental and sustainability concepts are integrated throughout the curriculum. (200 word max)

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Within the climate and culture standards for Social Studies, students learn agricultural practices of various regions and how people in other cultures interact with their environment. They study the long lasting effects of pollution within their science courses and use math and graphing skills to document trends over time. Some of the non-fiction selections used by reading classes include literature relating to the environment and renewable energy.

Environmental and sustainability concepts are integrated into assessments. (200 word max)

Included on the OPS Acuity Diagnostic test and on the Nebraska State assessments, questions pertaining to recycling, renewable energy, and cultural practices are included.

Students evidence high levels of proficiency in these assessments. (100 word max)

These assessments are administered primarily at the 5<sup>th</sup> and 8<sup>th</sup> grades. As of October of 2012, 53% and 65% of the fifth and 8<sup>th</sup> graders respectively met or exceeded the standards on the Acuity Science Assessment.

Professional development in environmental and sustainability education are provided to all teachers. (200 word max)

Teachers are encouraged to attend and may receive compensation for attending professional development offerings related to sustainability and environmental issues throughout the year. The Science teachers are all certified as Nebraska Project Wild and Project Wet instructors.

2. For schools serving grades 9-12, provide:

Percentage of last year's eligible graduates who completed the AP Environmental Science course during their high school career: n/a Percentage scoring a 3 or higher: n/a

3. How does your school use sustainability and the environment as a context for learning science, technology, engineering and mathematics thinking skills and content knowledge? (200 word max)

Students collaborated with Whispering Roots to construct an aquaponic system that utilizes fish waste to provide nutrients to a soilless grow bed that produces crops every 4-6 weeks. The system uses only 10% of the water that normal farming methods require and since it is a closed system, everything produced is certified organic. Students utilized math and engineering to construct the grow bed and use science and technology to understand how to maintain the system through routine water quality checks. Students then donate all produce generated to local food banks. Last year alone we donate close to 30 pounds of lettuce to the Heartland of America Food Bank.

4. How does your school use sustainability and the environment as a context for learning green technologies and career pathways? (200 word max)

Through the study of the aquaponic system, students studied agricultural practices and learned through visits to the University of Nebraska at Omaha various career opportunities related to the fields of agriculture, mathematics, and science. The school also hosts an annual SET for Life Conference where local scientists, university professors and engineering students from the Peter Kiewit Institute and Omaha North High Magnet present opportunities for career placement and educational opportunities in the areas of science, engineering and technology. Many students select sustainability issues for research and experimental science projects during the annual Science Fair as well.

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5. Describe students' civic/community engagement projects integrating environment and sustainability topics. (200 word max)

Students act as advocates for recycling in the school by collecting weekly recyclables. The students have also begun tracking the school's waste and will lead an advocacy campaign to help reduce our production of waste materials. Students have donated fresh produce generated from the two aquaponic systems utilized in the Service Learning class. The school officially adopted Kountze Park and routinely does park clean-ups.

6. Describe students' meaningful outdoor learning experiences at every grade level. (200 word max)

Most of the outdoor education conducted at the school is through the physical education department with a focus on lifetime fitness and nutrition goals. The after school club maintains the Urban Farm and uses the produce generated to educate the students and families on healthy eating selections.

7. Describe how outdoor learning is used to teach an array of subjects in contexts, engage the broader community, and develop civic skills. (200 word max)

Students who work on the Urban Farm partner with MaryBeth Butts, a collective youth provider and horticulturist to learn how to plant and care for outdoor gardens. When the structure was built last year, students partnered with the University of Nebraska at Omaha and Omaha North Engineering students to build and layout the grow beds used in the farm. Students also had the opportunity to visit the Children's Garden at Lauritzen Gardens to see how other outdoor gardens are designed and maintained.

8. Describe your partnerships to help your school and other schools achieve in the three Pillars. Include both the scope and impact of these partnerships. (Maximum 200 words)

Through the school's newest partnership with the Henry Doorly Zoo, students will begin to study the conservation efforts across the globe. Fifth grade students will study the environmental impact of butterfly migration and work to raise butterfly garden friendly plants to plant in the school's courtyard. Using the aquaponic system, students will grow butterfly friendly plants to give away during family nights so our community can also build butterfly gardens. Sixth grade students will study the chytrid disease in amphibians and learn how to collect data in the Carter Lake area and track the impact of aquatic life in the school's neighborhood. Seventh graders will study the conservation efforts in Madagascar and work with the non-profit organization Conservation Fusion to provide educational materials for the Malagasy people and eighth graders will study genetics and reproduction of plant and animal species. Through the partnership with the University of Nebraska at Omaha's Watershed project, students will test water quality at Carter Lake, IA and share this data on the Watershed Network. The continued partnership with Whispering Roots will still provide education on sustainable agriculture and nutrition and water science.

9. Describe any other ways that your school integrates core environment, sustainability, STEM, green technology and civics into curricula to provide effective environmental and sustainability education, highlighting on innovative or unique practices and partnerships. (Maximum 200 words)

Service learning through community and civic engagement is also a concept that our school embraces. The

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majority of the service learning projects conducted at KSTM are centered around environmental and sustainability issues. In seventh grade, one class is working with the organization Whispering Roots to maintain an Aquaponics garden. Students learned about sustainable agriculture through this experiential project and have used their critical thinking skills to analyze the benefits of this type of garden. The students donate the produce to a local food bank. Students who work on the Urban Farm partner with Mary Beth Butts, a collective youth provider and horticulturist to learn how to plant and care for outdoor gardens. When the structure was built last year, students partnered with the University of Nebraska at Omaha and Omaha North Engineering students to build and layout the grow beds used in the farm.

Another on-going service project for students to learn about waste pollution and its impact on their community is the adoption of the neighboring 11 acres park, Kountze Park. Two years ago, we officially adopted the park through Keep Omaha Beautiful's adopt a park program. When the weather allows, varying groups of students and teachers will assist in picking up liter at the park.

10. Submit up to 20 photos or up to 10 minutes of video content.