



District Sustainability Award Nominee Presentation Form

CERTIFICATIONS

District's Certifications

The signatures of the district superintendent on the next page certify that each of the statements below concerning the district's eligibility and compliance with the following requirements is true and correct to the best of the superintendent's knowledge.

1. The district has been evaluated and selected from among districts 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.
2. The district is providing 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.
3. OCR has not issued a violation letter of findings to the school district concluding that the nominated school district 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.
4. The U.S. Department of Justice does not have a pending suit alleging that the school district has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
5. 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 school district in question; or if there are such findings, the state or school district has corrected, or agreed to correct, the findings.
6. The district 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 District Sustainability Award 2019-2021

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

District Name: Parkway School District
(As it should appear on an award)

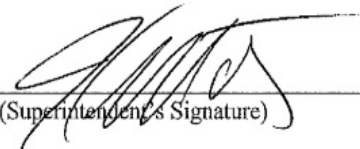
Address: 455 N. Woods Mill Road, Chesterfield, MO 63017

Telephone: 314-415-8100 Fax: 314-415-8009

Web site/URL: www.parkwayschools.net E-mail: kmarty@parkwayschools.net

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




(Superintendent's Signature) 12-19-2019

Date: 12-19-2019

Nominating Authority's Certifications

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

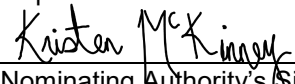
1. The district is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental education.
2. The district meets all applicable federal civil rights 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:

Name of Nominating Authority:

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

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


(Nominating Authority's Signature) Date: 02.05.2020

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.



Parkway School District - St. Louis, MO

School Contact Information

School District Name: Parkway School District	Street Address: 455 N. Woods Mill Rd, Chesterfield	
Location: St. Louis	State: MO	Zip: 63017
Website: www.parkwayschools.net	Facebook:	
Superintendent: Keith Marty		
Superintendent Email: kmarty@parkwayschools.net	Superintendent Phone:314-415-8002	
Lead Applicant and Position (if different): Hannah Carter, Sustainability Coordinator		
Lead Applicant Email: hcarte@parkwayschools.net	Lead Applicant Phone: 314-415-8256	

School Eligibility and Compliance (put an x by all that apply)

1. The school district has some configuration that includes one or more of grades Pre-K-12.	x
2. The school district 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.	x
3. The public school district is not 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 school districts, however, are subject to and in compliance with statutory and regulatory requirements to comply with Federal civil rights laws.	x
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.	x
5. The U.S. Department of Justice does not have a pending suit alleging that the public school district as a whole or one of its schools has violated one or more of the civil rights statutes or the Constitution's equal protection clause.	x
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 district or school in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.	x

7. The school district 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.	x
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School District Characteristics

Level (x) Early Learning Center (x) Elementary (PK - 5 or 6) (x) K - 8 (x) Middle (6 - 8 or 9) (x) High (9 or 10 - 12)	School District Type (x) Public () Private/Independent () Charter () Magnet	How would you describe your school district? () Urban (x) Suburban () Rural	Total Enrolled: 17551 Graduation rate: 95.65% Attendance rate: 91.1%
Does your school district serve 40% or more students from disadvantaged households? () Yes (x) No			
% receiving FRPL: 19%	% limited English proficient: 6.01%	% total disadvantaged students – without double counting , provide the total percentage of students that are receiving FRPL and/or have limited English proficiency, and/or have learning disabilities: 33.58%	

Engagement, Benchmarking and Recognition

List the members of the team that helped prepare documentation and their role in the school

1. Hannah Carter, Sustainability Coordinator
2. Erik Lueders, Director of Sustainability and Purchasing
3. Jennifer Abdel-Azim, Coordinator of Elementary STEM
4. Jennifer Proffitt Coordinator of High School STEM
5. Jennifer Stanfill, Director of Choice Programs
6. Meredith Jacques, Spark! Bioscience program director
7. Stephanie Kline-Tissi, Safety Manager
8. Marlene Pfeiffer, Director of Nutrition Services
9. Robin Wallin, Director of Health Services
10. Bill Freymuth, Supervisor of Grounds
11. Karen LaFever, AP Environmental Science teacher
12. Aaron McPherson, Principal of Southwest Middle
13. Kira Brennan, 8th grade teacher Northeast Middle
14. Laurie Leary, MOSAICS gifted teacher
15. Charlotte Ijei, Director of Pupil and Personnel Diversity
16. Erin Schulte, Coordinator of Counselling
17. Leah Gonzalez, Wellness Coordinator

List any programs you are currently using to benchmark your progress in sustainability

1. Energy Star Portfolio Manager
2. EnergyCap
3. Talisen- Enterprise Sustainability Platform
4. Tableau
5. LEED - EBOM
6. GRITS

List any recognition or awards you have received in the last five years related to your efforts in any of the pillars

1. School District Scholarship Program (\$20,000) - USGBC Center for Green Schools – 2015
2. Business Health Culture Award – St Louis Area Business Health Coalition - 2019
3. Energy Star certified buildings
 - a. 2019 - 15 buildings
 - b. 2018 –

- c. 2017 –
- d. 2016 -
- 4. Green Schools Quest
 - a. 2018-2019: Highcroft Ridge Elementary, 2nd place
 - b. 2014-2015: North High, 2nd place
 - c. 2013-2014: Central High, 1st place

Summary of Achievements

The mission of the Parkway School District (PSD) is to ensure all students are capable, curious, caring and confident learners who understand and respond to the challenges of an ever-changing world. Following district mission, tremendous progress has been made over the past many years to incorporate sustainable practices, reduce environmental impact, focus on health and wellness, and develop innovative practices that support environmental and sustainability literacy.

PSD promotes the Whole-School Sustainability approach to conserving natural and fiscal resources, reducing the impact of district operations on the environment, and protecting the health of students, staff, and the community within the goals of the strategic plan. The strategic plan and district mission are the foundations upon which PSD educates students and integrates environmentally, socially, and fiscally sustainable best practices into all areas within the district. The Board of Education has approved various environmental policies related to energy management conservation, sustainable landscaping, and waste minimization. Currently, a robust and comprehensive sustainability policy with associated guidelines is being written to be implemented in early 2020.

To uphold our commitment to instilling a culture of resource conservation and sustainability, both inside and outside of the classroom, PSD has developed six sustainability goals toward energy efficiency, water conservation, waste reduction, health and wellness, sustainable outdoor environments, and sustainability learning:

1. The district is 84% of the way towards the energy efficiency goal to **reduce energy use 20% by 2025 from a 2015 baseline** through efficient equipment upgrades, proactive conservation behaviors, and expansion of renewable energy technologies. Energy Star shows a cumulative districtwide savings of approximately 77,000,000 kBTU and \$960,000 since 2010.
2. By conserving water throughout our district, PSD seeks to achieve **20% water use reduction by 2025 from a 2015 baseline** through conservation practices, upgrading plumbing fixtures, and rainwater capture systems. ENERGY STAR portfolio manager shows that PSD has reduced water use by 9% since 2012.
3. The goal for waste reduction includes **reducing, reusing, recycling, and composting 70% of waste by 2025 to divert materials from the landfill**. With the implementation of both the composting and recycling programs, PSD was able to cut the amount of landfill dumpsters across the district in half since 2012.
4. **Improving the indoor environmental quality of buildings and engaging students and staff in more health and wellness activities** is the health and wellness goal. Multiple schools with food gardens harvest their produce for use in their daily salad bar. One PSD elementary school also produces enough fresh produce each year to send to the nearby high school for use in district-wide meal preparation.
5. The sustainable outdoor environment goal seeks to **regularly engage students and staff in healthy outdoor environments and transitioning green spaces to native landscapes or produce gardens conducive to learning**.
6. In 2019, the Board of Education approved the addition of the Parkway Principles of Education for Sustainability to the guaranteed curriculum framework for all K-12 students. By **increasing opportunities for students to engage in sustainability topics**, PSD seeks to increase students' sustainability literacy and capabilities to create a more sustainable future.

PSD believes that incorporating sustainability into classroom learning for all K-12 students is not an optional addition to lessons and should be used as a lens to engage students in real-world problem solving. A team of passionate teachers, the Sustainability Department, the elementary STEM curriculum coordinator, and staff from

the Missouri Botanical Gardens EarthWays Center collaborated to create Parkway's Principles of Education for Sustainability. The curriculum framework for all grade levels and subject areas includes the Parkway Principles of Education for Sustainability. These principles are "We share the Earth", "We can make a difference", "We respect the limits of different systems", and "We understand that systems change". Each of the principles have indicators including diversity, using resources wisely, our actions impact systems, local and global citizenship, and interconnectedness that are applied broadly throughout the curriculum. The principles are addressed in a wide variety of contexts and continually build in complexity throughout each grade level. PSD is one of the first school districts within Missouri to incorporate sustainability into the guaranteed curriculum for all K-12 students.

In order to teach students to be responsible citizens of their local community and global society, PSD provides learning opportunities that develop environmental literacy and leadership skills. These include the Outdoor School program, environmentally-focused course offerings, service learning and environmental stewardship projects, the Sustainable Schools Challenge, project based learning (PBL) units, and utilizing school campuses as outdoor classrooms. High school students within the Spark! program complement their classroom success with experience working alongside industry professionals to create solutions to real-world problems. Educators foster student creativity through PBL units that utilize a design, build, and test model to solve real-world problems in many grade levels.

PSD believes in fully utilizing the expertise of staff to work directly with students and peer learning for students to teach each other to increase engagement in the classroom. Nutrition Services has partnered with culinary classes and other classrooms to provide nutrition education, menu creation contests, and taste testing opportunities with vendors. The Sustainability Department regularly meets with student green teams and classes to provide guidance and education toward sustainability projects and audits. Students from the Spark! Teaching and Learning strand provide NCADA anti-bullying lessons to 4th grade students. High school students provide services to the community and other Parkway schools during their annual Day of Service projects.

Parkway is focused on both the physical and mental health and wellness of students, staff, and their families. The Employee Assistance Program and employee clinic system with Care ATC among countless other wellness programs have earned PSD the 2019 Business Health Culture Award. PSD believes that investing in employee health allows staff to be their best for students and act as role models. Student health and wellness goes far beyond the amount of time spent in physical education classes and includes weekly fitness and mental health events, unique outdoor education experiences and extracurricular activities, social and emotional support staff, and comprehensive K-12 counselling curriculum.

Substantial reductions in environmental impact, including energy use, water use, and landfill diversion have been documented and are regularly monitored. Progress toward the district sustainability goals and environmental impact reports are shared with district administration, staff, and students. District and building-level dashboards are being created to share environmental impact data that will support a culture of resource conservation and environmental stewardship at all Parkway schools.

Pillar 1: Reduce Environmental Impact and Costs

Element IA: Energy

- PSD has partnered with the U.S. Department of Energy's Better Business Challenge and committed to a 20% reduction in energy intensity across 3.3 million square feet by 2025 from a 2015 baseline. An 18% reduction in energy intensity has been realized thus far with projected reductions beyond 20% by 2025. PSD is one of only two school districts in the state of Missouri to commit to a large energy reduction through this program. Design for new facilities and major renovations requires buildings to use 37 kBtu/sq ft/year as a maximum with a goal of 19 kBtu/sq ft/year or less.

- PSD uses Energy Cap and Energy Star portfolio manager to track energy and water usage. In 2019, 50% of Parkway schools were Energy Star certified with Energy Star scores above 75. Energy Star shows a cumulative savings of approximately 77,000,000 kBTU and \$960,000 since 2010.
- In May of 2012, the Board approved the installation of solar panels at each of the district's 33 buildings by Brightergy (now Generate Capital). This initial project had a total capacity of 825 kW. In the summer of 2019, a 300 kW expansion across four sites was completed bringing the total district capacity to over 1.1 MW.
- PSD currently participates in utility incentive rebate programs (Ameren Missouri and Spire) to fund the installation of occupancy sensors, LED lighting, building controls, and efficient HVAC equipment to reduce energy use. Through this program, the district has completed 177 projects and received \$1,475,000 in incentives with an associated energy savings of 11.8 million kWh since 2009. These received rebates are used within an energy revolving loan fund to support additional energy savings projects. PSD has been able to complete 10 school conversions to LED with plans for 3 more school-wide conversions by next school year. The State of Missouri Department of Economic Development Energy Efficiency Loan was used to install exterior LED lighting at all 33 district owned buildings.
- PSD has a Board of Education policy for Energy Management Conservation guidelines that addresses heating and cooling set points, turning off lighting and office equipment, and daily shutdown checklists for custodial staff. These guidelines are currently under revision to include HVAC equipment and performance, new construction and major renovations, specific lighting levels, and energy reporting. Per state statute, all purchases of office equipment and appliances are required to be Energy Star certified.
- Desktop computers, laptops, and monitors are on a centralized PC Power Management system. All devices are put into standby after 30 minutes of inactivity during the school day and after 15 minutes of inactivity after school hours. This system is currently being expanded to include Chromebooks and bring the total number of devices with power management to over 15,000 devices.
- Recent projects in PSD include energy efficiency upgrades:
 - North High was upgraded with high efficiency air cooled chillers that eliminated the three existing cooling towers and the associated water use in 2017. \$108,000 in utility rebates was received and used to fund the project and the ongoing conversion to LED lighting.
 - In 2018, rooftop units were replaced at South Middle with high efficiency units connecting to a recently installed high efficiency centralized boiler system along with the partial conversion to LED lighting.
 - From 2018 through ongoing projects, there are BAS Control system upgrades from older legacy BAS equipment to newer native equipment allows for greater optimization of energy systems and have an estimated energy savings of 1,500,000 kWh.
 - In 2017 at Central High, a performance contract replacing multiple roofing systems with R-30 high efficiency roof systems combined with a significant replacement of multiple rooftop units to high efficiency equipment was completed while receiving \$115,000 in utility incentives.
 - In 2017, West High had a retro commissioning project which included adding motors and VFDs to major equipment and programming multiple reset schedules to allow for greater energy savings. This project received \$330,000 in utility incentives and included the complete conversion to LED lighting followed by an expansion of the solar array and controls upgrades.
 - In 2018, Claymont Elementary underwent a minor retro commissioning project that included the optimization of existing HVAC equipment and removing local controllers on several spaces and

recontrolling to a centralized BAS system which allowed for scheduling capabilities and greater energy savings. This was in addition to a complete conversion to LED lighting.

- In 2015, a \$680,000 lighting project was completed to convert all exterior lighting to LED across the district with the State of Missouri Department of Economic Development Energy Efficiency Loan. This LED exterior lighting is dimmable based on occupancy.
 - At South High, a performance contract which includes a lighting upgrades, building envelope sealing, and major chiller replacement was coupled with the installation of a 120 well geothermal system that will be completed in early 2020 and is guaranteed to save 1,823,325 kWh annually.
 - In 2020, the roof at Hanna Woods Elementary will be replaced and 10 solar tubes will be installed to increase daylight harvesting. This school is also currently undergoing a complete conversion to LED.
 - All future improvements will be in accordance with ASHRAE Advanced Energy Design Guidelines for 50% energy reduction.
- District buildings are continually monitored for HVAC optimization. All HVAC systems are controlled by a centralized BAS that allows for setback schedules and advanced sequence of operations strategies to save energy. A task force meets weekly to identify opportunities for energy savings and efficiency using a monitoring based commissioning platform. This year, a retro-commissioning service provider will use these platforms to assist the taskforce in identifying and implementing solutions to achieve greater energy efficiency. The systems are designed to bring in outside air for free cooling and properly ventilate spaces based on CO₂ levels while maintaining optimal temperature and humidity set points. VAV boxes have been installed throughout most of the district and along with the ongoing upgrades to VFD's on equipment.

Element IB: Water and Grounds

- Water consumption is tracked through ENERGY STAR portfolio manager and regularly analyzed to identify leaks and misuse. ENERGY STAR portfolio manager shows that PSD has reduced water use by 9% since 2012.
- The four high schools have irrigation systems specifically for athletic fields and only 3 elementary schools and 3 middle schools have irrigation for turf survival. The irrigation systems are metered separately and are used during early morning. All high schools have artificial turf football fields.
- Low flow aerators have been installed on faucets across all schools in the district reducing water flow to 0.5 gallons per minute (gpm) from the existing 2.2 gpm faucets. Dual flush handles have been installed at 11 schools with the remaining schools to soon follow.
- The landscaping at fifteen schools has been replaced in full or in part with drought tolerant, Missouri native species with three more sites planned for 2020. All plantings are required to be Missouri Native plant species. Barretts Elementary and the Administrative Center have large sections of prairie installed with Missouri native species. In addition, many locations use native landscaping Best Management Practices (BMPs) to mitigate storm water runoff.
- The grounds at many schools are devoted to ecologically beneficial uses. These include produce gardens, rain gardens, pollinator gardens, indoor hydroponic gardens, native plant and animal habitats, outdoor classrooms, and hiking trails that are used as outdoor learning spaces. Schools harvest produce from their gardens and it is collected by Nutrition Services staff for use in the daily menu offerings and salad bars across the district.
 - Indoor hydroponic tower gardens have been installed at 7 schools to provide STEM learning experiences. The tower gardens connect students to their food and allow them to explore topics

such as sustainable farming, water and air quality, social equity, farm to table, and global food security in a fun and organic way.

- There are bioswales and bioretention basins at 11 schools to manage storm water run-off. Permeable pavement systems have been installed at three schools with plans for another site to be installed in 2020.

Element IC: Waste

- In 2012, PSD piloted a composting program at North High, Northeast Middle, and four north area elementary schools through Total Organics Recycling. The following year, the program was rolled out to all 28 Parkway schools and the volume of composted material continues to grow each year. PSD collaborated with Pattonville School District in 2014 to support their efforts in bringing composting to their district. All Parkway schools compost their food waste, lunch trays, bowls, utensils, soiled paper, and coffee cups. Weight reports and contamination reports are obtained from the waste hauler regularly. In October 2019, PSD composted 39 tons of organic material from school cafeterias.
- All schools participate in single stream recycling of plastics, glass, metal, and paper products. Weight reports are obtained monthly from the waste hauler. In 2018-2019, PSD recycled 2.4 million pounds of recyclables and has increased recycling volume by nearly 50% since 2012. The schools with the highest recycling rates are recognized at an annual event and through monthly newsletters. The Sustainability Department regularly works with schools to ensure proper waste sorting through education of the students and staff and providing signage, bins, and grabber tools.
- The district has eliminated the use of plastic straws and continually seeks to eliminate other single use plastics. With the implementation of both the composting and recycling programs, PSD was able to cut the amount of landfill dumpsters across the district in half.
- The Board of Education has approved guidelines for the handling and disposal of hazardous and universal wastes that includes mercury containing devices, batteries, tires, PCB ballasts, lead based paints, asbestos, and various other materials found throughout the district. These items are prohibited from entering the general waste stream and are required to have a certificate of proper disposal from the certified waste hauler. Refrigerant is managed by certified technicians and disposed of by companies certified in refrigerant recovery.
- There are multiple steps to ensure that district assets are reused, repurposed, repaired, or recycled instead of being placed in the landfill. All unwanted materials and furniture from schools is placed in surplus at the district warehouse. The warehouse manager reallocates these goods as necessary for reuse across the district. Items that cannot be reused are sold online or sent off for scrap metal recycling. The district collects all spent lamps including fluorescent lamps and scrap metal for recycling from across the district and at all construction sites. Efforts are also being made to recycle ceiling tile, carpet, and other construction and demolition materials. Technology Services repairs and reuses devices for parts before designating non-functioning devices as e-scrap. PSD provides Call2Recycle boxes to all schools for battery and cell phone recycling. The use of rechargeable batteries is highly encouraged at all schools.
- The Environmental Services department oversees integrated pest management control methods that are used to limit the use of pesticides and custodial employees are trained in IPM methods. This includes a full time employee whose primary responsibility is implementing IPM best practices within the district.
- PSD takes many steps to properly use, store, and dispose of hazardous materials. In 2016, the district adopted the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Lab teachers are trained annually on the system and their lab safety equipment. Hazardous chemicals that are used in lab experiments are disposed of properly in labeled containers by a certified hazardous waste hauler, but chemicals that are safe to go down the drain are used whenever possible. Experiments have been designed to use fewer and less toxic chemicals on a microscale with droppers and well plates.

- PSD uses greener and less harmful products whenever possible, including pesticides, herbicides, cleaners, and floor treatment products. Spill prevention and control plans are in place within Board approved guidelines for gas spills, equipment leaks, release oil from PCB ballasts, and other instances within classrooms and school grounds.

Element ID: Alternative Transportation

- PSD has approximately 12,000 daily school bus riders which make up 72% of the student population. For the 1,800 students that live close to schools, the district encourages walking or biking to school and actually doesn't provide bus service for those that live very close. 83% of the students that live far enough away from school to be eligible to ride the bus are daily school bus riders.
 - Green Trails Elementary has focused on reducing their vehicle emissions and in the past year has increased bike ridership from two to more than twenty daily bike riders through fun assemblies and helmet wearing days.
 - Claymont Elementary and Green Trails Elementary have organized a "Walking School Bus" day for everyone to participate in from a central drop-off location that raises awareness about vehicle emissions while having fun.
- In 2013, PSD received \$1.5 million in funding through a federal highway grant to acquire 30 CNG buses and build a CNG fueling station. This project made Parkway one of the only school districts in the state to use CNG buses and the fueling station is one of only a few in the region. The CNG buses make up 20% of the total school bus fleet of 150, the rest of which are newer, cleaner burning diesel. An additional CNG fueling station was added in 2019 to allow for two buses to simultaneously fuel and increase capacity for expanding the CNG bus fleet.
- PSD follows the local St. Louis County ordinance that limits idling of heavy-duty diesel vehicles to no more than three minutes in any 60-minute period. Some schools also have no-idling signs posted in car pick-up areas.

Element IE: Purchasing

- The Board encourages district staff to purchase products manufactured, assembled or produced in the United States. The district purchases goods and services that have a lesser or reduced effect on human health and the environment and takes into consideration, to the extent feasible, raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, disposal, energy efficiency, product performance, durability, safety, the needs of the purchaser, and cost.
- PSD requires all appliances and technology equipment to be Energy Star certified. All copy paper purchased by the district is 30% recycled content. The paper towels and toilet tissue purchased are Green Seal certified and made with 100% recycled content. Office furniture purchased is BIFMA Level certified, or certified by comparable rating systems. All paint purchased for the district is zero VOC containing.
- The district prioritizes products that meet DESE's guidelines on environmentally friendly products. All paint purchased for the district contains zero VOC's. Most all of the cleaning products purchased for the school are compliant with the Missouri Green Cleaning Guidelines and Specifications for Schools with the exception of disinfectant and heavy degreaser.
- PSD purchases agricultural products that are produced within the United States as much as possible for the nutrition program. Vaccaro & Sons is the local company that provides Parkway with produce from local farms such as Thies Farm that is located less than five miles from the district.

Pillar II: Improve the Health and Wellness of Students and Staff

Element IIA: Environmental Health

- Integrated Pest Management practices have reduced the use of any pesticides to negligible amounts. Board policy requires custodians and other employees training in IPM methods to prevent the introduction of pests into buildings and how to naturally deter pests. This includes a full time employee whose primary responsibility is implementing IPM best practices within the district.
- PSD takes many steps to properly use, store, and dispose of hazardous materials. In 2016, the district adopted the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Chemicals are properly labeled before and after use within the lab and are disposed of using a certified hazardous waste hauler. As much as possible, labs use reagents that are safe to go down the drain and perform experiments using droppers and well plates to minimize waste. Spill control protocols are in place including spill containment kits with the intention to keep building occupants safe and keep spills out of a sanitary or storm drain.
- PSD seeks to create optimal learning and working environments for all students and staff that are healthy and conducive to creativity. Through the Sustainability Administrative Procedures for Energy, light levels are required to be kept at appropriate levels throughout all building areas and daylighting is suggested as much as possible for both occupant wellbeing and energy savings. Major renovations and new construction projects are to increase a buildings daylighting opportunities by adding solar tubes and enlarging or adding windows when possible.
- The Environmental Services Department maintains the asbestos control program and provides each building with the Asbestos Management Plan. Staff are trained to report possible asbestos material without making contact through annual training. All asbestos abatement work is done by licensed asbestos abatement contractors. A lead based paint survey on building surfaces was completed across the district. All construction and major renovation projects include work to verify the presence or absence of lead based paint and asbestos.
- PSD follows the Missouri Green Cleaning Guidelines and Specifications for Schools for the purchase of cleaning supplies and equipment. All cleaning products purchased are Green Seal certified with the exception of heavy degreaser and disinfectant, which are used sparingly. These guidelines and specifications incorporate products that are less toxic, low VOC content, biodegradable, derived from renewable resources, free of fragrance and dyes, and designed for use in cold water to conserve energy. Carpet tiles and hard flooring are used throughout the district for easy removal of debris and limit the need for heavy carpet cleaners.
- PSD has an Indoor Air Quality Task Force that regularly monitors and resolves moisture issues in the early stages to prevent mold and/or mildew growth based on the EPA's Tools for Schools program. The Environmental Services Department surveys all schools annually to take air quality samples. Complaints are followed immediately by on-site inspections and data collection with results being shared with all stakeholders. Maintenance staff follow a checklist to identify potential HVAC issues that include cleaning of ducts, drip pans, and filters, cycling dampers, and other areas outlined within the Tools for Schools program.
- CO2 is currently monitored in large spaces and some classroom areas throughout the district. Sensors tied into the BAS introduce fresh air as needed to keep CO2 below 1100 ppm. Outside air dampers without CO2 control are kept open at a minimum of 20% for fresh air ventilation. Relative humidity sensors are used in various areas throughout the district to control building moisture levels during occupied schedules. New HVAC equipment is designed and installed to control for both CO2 and relative humidity.
- PSD follows the local St. Louis County ordinance that limits idling of heavy-duty diesel vehicles to no more than three minutes in any 60-minute period. Some schools also have no-idling signs posted in car pick-up areas.

Element IIB: Nutrition and Fitness

- PSD's Nutrition Services prepares fresh foods for all schools daily and provides both breakfast and lunch for students. During the growing season much of the produce used, with the exception of pineapples and bananas, is grown locally within 150 miles of the district. It is procured through our distributor at the St. Louis Produce Market or through the USDA Department of Defense's Fresh Fruit and Vegetable Program. PSD participates in the USDA's National School Lunch Program and the School Breakfast Program to provide healthy and balanced low-cost or free meals to students each day.
- Everyday Parkway students at all schools have healthy meal options including a salad bar filled with fresh produce. Meatless options such as plant-based chicken, veggie burgers, and beans are offered daily and advertised as healthy alternatives that reduce your carbon footprint. Each school has a share table that collects whole fruits, unopened milk and juice, and snacks to reduce food waste and provide for hungry students. The food is used by students who would like a second serving, forgot their snack, or to send home with students who may not get enough to eat at home. Before school breaks, all milk and juice cartons are collected and donated to a local community food pantry.
- Multiple schools with produce gardens including Southwest Middle, Northeast Middle, and Oak Brook Elementary harvest their produce for use in their daily salad bar. In addition to filling the salad bar, Green Trails Elementary produces enough fresh produce each year to send to the nearby high school for use in district-wide meal preparation.
- Students are involved in taste testing through the school year when various vendors come to the schools. Nutrition Services staff visit classrooms regularly to provide nutrition education and gain input from students on district menus. Students have the opportunity to design lunch menus through annual menu creation contests. Each year, Nutrition Services staff meet with high school culinary classes to discuss Parkway's food procurement and menu design. Students in these classes work with Nutrition Services to design monthly school menus for use throughout the district.
- In 2016, the Parkway Food Pantry opened at Northeast Middle to provide food to students and families throughout the district. This food pantry is run by the Director of Pupil and Personnel Diversity, many volunteers, and Parkway students in coordination with district social workers. Multiple schools have food backpack programs that send students home with food over the weekend, school breaks, and over the summer. Southwest Middle has a fresh food pantry to provide families with food from their large school produce garden throughout the year and through their backpack program.
- All elementary students participate in 120 to 180 minutes of physical and health education each week, which is more than the Missouri Department of Education requirements of 50 minutes per week. All middle school students participate in daily physical and health education that totals 7,700 minutes annually, which is much more than 4,500 minutes required annually by the Missouri Department of Education. High school students are required to have at least one physical education credit and a half credit of health to graduate. There are many electives at the high schools that engage students in mental wellness and outdoor education opportunities. There are multiple yoga classes are offered and instructed by certified yoga instructors. Students are also offered courses for scuba certification, lifeguard certification, and advanced aquatics that are taught by certified instructors. There are many climbing walls located in schools throughout the district that are used in daily physical education and extra-curricular climbing clubs.
 - Adventure Pursuits is a physical education course that 240 Parkway high school students participate in annually. In this course, students utilize a high ropes course located in a wooded area at North High instructed by certified high ropes instructors. This course also promotes cooperation and critical thinking through outdoor activities such as rock climbing, kayaking, cycling, orienteering, and outdoor living.

- There is a low ropes course within a wooded area at Fern Ridge High that 5th grade students from across the district travel to for leadership and physical education activities.
- Oak Brook Elementary, Southwest Middle, South Middle, and Green Trails Elementary have hiking trails that run throughout wooded regions of the school campus and are used for outdoor learning opportunities.
- There are fitness centers at each of the five middle schools and four high schools that underwent major upgrades with new equipment in 2018. These fitness centers include traditional gym equipment, weight lifting, and CrossFit equipment.
- In 6th - 8th grade PE, students participate in an “Adventure and Outdoor Education” unit where they are introduced to the low ropes course, rock climbing, and team building to promote leadership skills through problem-solving initiatives. Students each year, from kindergarten through 8th grade, learn about nutrition and personal health and wellness. The Safe and Drug Free program has been in place within Parkway for the last 40 years and students start this program in 1st grade. 5th grade students receive additional training through the Owe to be Drug Free program. Spark! Teaching and Learning students get trained by the National Council on Alcoholism and Drug Abuse to teach an anti-bullying lesson to 4th grade students.
- In 2018, the Parkway Park Tour began as a way to introduce all Parkway families to their local parks and show the community how easy it can be to get kids outside. These are held between two and four times per year, each at a different park within the area. Both students and parents engage in outdoor recreation activities using the provided bikes and kayaks to learn about their local area and trail systems. Families play yard games, sports, and try new activities during these fun-filled evenings.
- There are many fitness clubs and events going on at each school throughout the year. Many schools hold Girls on the Run and Let Me Run 5k's, various fun runs, Jump Rope for Heart, and Health Moves Minds events. Most schools also participate in Wellness Wednesdays where students choose from mindfulness activities, yoga, and sports games. Green Trails Elementary and Claymont Elementary have participated in the International walk to school day. The high schools offer stress management activities and bring in service dogs during finals week to help students.
- PSD has a robust and comprehensive staff wellness program. Last year, there were 449 staff wellness events across the district that more than 2,100 of the district's 2,600 staff participated in. In 2019, PSD launched an employee assistance program that supports the social and emotional health of Parkway staff and their families to licensed counselors, certified child development and parenting professionals, life coaches, and licensed dietitians. There is an employee gym located at Central Middle that is staffed weekly by a personal trainer. Other wellness initiatives include blood pressure and diabetes management programs, annual on-site flu shot and mammography services, Health for the Holidays, Real Appeal fitness program, preventative dental care initiatives, discounted gym memberships, and a cancer prevention program. There are five Care ATC clinics are located throughout the district to provide health care and medications to Parkway staff and their families. In addition to district-wide health and wellness programs, each building is required to host at least two employee wellness events annually. These have included healthy cooking classes from local universities, yoga and massage therapy by licensed professionals, walking clubs, onsite screenings, and lectures and counseling on stress management and whole foods eating.
- There is a district wellness committee made up of parents, students, staff, and community members that meet monthly. There are 32 wellness leaders across the district that put together district health and wellness initiatives. Throughout the year, many wellness activities and classes are offered during professional development. Wellness classes are also offered for staff and community members through a partnership with the Parkway-Rockwood Community Education program.
- In addition to the wellness initiatives offered district-wide, PSD supports the mental health and physical wellbeing of students through each school's registered nurse, student wellness leader, and counselors in

addition to three district social workers and four district social and emotional support specialists. ComTree travels to each school and provides free oral health services to students. PSD also partners with Eye Thrive to bring a mobile vision clinic to all schools and provide glasses to students from low-income families. Each elementary school has a “calm down” room for students to use as needed for emotional self-regulation. PSD has increased the focus on social and emotional learning within the past few years. In addition to the social and emotional support staff, there is guaranteed counseling curriculum for all K-12 students. School staff across the district are receiving Trauma-Informed Care training that helps to recognize the presence of trauma symptoms in students and staff to become Trauma-Informed schools. Currently, all high schools have a Care Coordinator that support high risk students in need of additional external support systems with plans to expand Care Coordinators to all middle schools by next year and to each elementary region in following years.

Pillar III: Provide Effective Environmental and Sustainability Education

Element IIIA: Interdisciplinary Learning Experiences

- In 2019, the Board of Education approved the addition of the Parkway Principles of Education for Sustainability to the guaranteed curriculum framework for all K-12 students. These principles were established by a task force including elementary teachers, the Sustainability Department, the elementary STEM curriculum coordinator, and the Missouri Botanical Garden’s EarthWays Center. This taskforce met for a full day of professional development to learn more about education for sustainability, create the principles, and find natural connections between sustainability and the existing elementary science curriculum to integrate into classroom learning. The Parkway Principles of Education for Sustainability are We share the Earth, We can make a difference, We respect the limits of different systems, and We understand that systems change. Each of the principles have indicators including diversity, using resources wisely, our actions impact systems, local and global citizenship, and interconnectedness. During the district-wide professional development day in January, sessions about integrating sustainability learning into the existing curriculum will be offered by the EarthWays Center, Parkway Sustainability Department, and teachers from the education for sustainability taskforce for all Parkway elementary teachers.
- The Parkway Sustainability Department piloted the Sustainable Schools Challenge to increase sustainability learning and meet the district sustainability goals in early 2019. It was such a success with over 2,100 participants and -- activities reported in only four months that the challenge is running throughout the whole 2019-2020 school year. All students and staff can participate in activities that are related to the district goals for energy efficiency, water conservation, waste reduction, sustainable outdoor environments, sustainability, and health and wellness. Each month, the Sustainable Schools Challenge focuses on a different U.N. Sustainable Development Goal through the monthly mini challenges and newsletters. By submitting activities for points, schools compete for prizes to fund other sustainability projects. Some of the activities that have been submitted include No Power Hour campaigns, establishing and maintaining gardens, creating student Green Teams, raising school awareness about sustainability topics, waste-free lunch days, collecting donations for the Parkway Food Pantry, and campus clean-up days.
- Each year, many Parkway schools participate in the Green Schools Quest, a project based sustainability competition, through the USGBC-Missouri Gateway Chapter. Of the 70 schools participating during the 2019-2020 school year, 11 of those are Parkway schools from all grade levels. Participating schools are paired with a community mentor from a wide variety of career fields based on project type. This year, Pierremont Elementary is completing a four part project including a pollinator garden, a freshwater habitat, hydroponic produce garden, and student-built Gaga ball pit. Parkway schools have placed in the Green Schools Quest in 2014, 2015, and 2019.
- All 1,300 6th grade students across PSD participate in the Outdoor School Program at Camp Lakewood. Students are immersed in hands-on, place based learning about their impacts on the environment and the interconnectedness of all living things during their 4-night stay. Students keep a field guide as they go

through the units covered in the Outdoor School Program including local geology, horseback riding, tree identification, habitat restoration, survival skills, hiking, soil testing, gardening, water quality testing, stream insects and crustaceans, cartography, and skulls and pelts. Currently, there are plans being made to restore the classroom building at Camp Lakewood to make it a “living building” that is as close to zero net energy, water, and waste as possible.

- A new program beginning in the next school year is a partnership between Parkway elementary schools and Edmund A. Babler state park to provide outdoor environmental education to 3rd through 5th graders. Multiple times throughout the year, educators from Babler will visit the 18 elementary schools to teach hands-on environmental science lessons using the school’s campus. 3rd grade students will spend a day at Babler state park to provide immersive, hands-on learning about their local environment and ecology.
- PSD’s dedicated staff want to engage students in “hands-on” learning to solve real world problems in a place-based learning approach. Most schools have gardens that are used to enhance classroom learning in addition to using the campus as an outdoor classroom.
 - Southwest Middle has two outdoor classrooms and a trail system used by science classes and students preparing for outdoor school that is managed by the school’s Eco Action team. The Missouri Department of Natural resources meets with 6th grade students to use the large storm water retention basin to study aquatic ecosystems and perform water quality testing. The culinary classes and gardening club manage the garden in partnership with a local nonprofit, Gateway Greening, to provide produce for the culinary class, school salad bar, and fresh food pantry. During the 7th grade Forest Management unit, students learn about their forested campus and work to remove acres of honeysuckle in collaboration with the city of Manchester. This year, the whole school gathered to learn about weather and climate through the launch of a weather balloon with various data loggers and experiments attached through a Toshiba grant and the help of local meteorologists.
 - North High has bee hives at the Ameren Pollinator Project area near the school with plans to increase the number of hives in partnership with the electric utility, Ameren Missouri. A new greenhouse is scheduled to open during the 2019-2020 school year for use by many science classes and students throughout the district. Curriculum has been created to integrate the greenhouse into classroom learning. The nearby Parkway Early Childhood Center will use the greenhouse to teach students about gardening, hydroponics, and upcycling. Students from Northeast Middle will be using the greenhouse to provide fresh produce for the Parkway Food Pantry. North High’s AP Environmental Science class does an annual year long biodiversity study at the nearby Beckemeier Conservation area. Students take field trips to do water quality testing at local parks and conservation areas to provide results and suggestions to the municipalities. The students measure for ozone throughout the building and share the findings with district administration. The creek and wooded areas on campus are used by science classes for biodiversity observation walks and plant structure studies. North High has participated in the Lexus Eco Challenge and Envirothon competitions for nearly ten years and frequently receives recognition regionally and nationally. The current Lexus Eco Challenge team is creating a hydroponic system that purifies water for drinking while growing food to place in the greenhouse with hopes of sharing with Heifer International. Last year, the team won the national competition and \$25,000 by creating a fertilizer that prevents excess phosphates and nitrates from running off and polluting nearby water systems. It also has a 75% higher retention rate than soil alone and helps to hold onto the nutrients for redistribution at a molecular level.
- Environmental education is often limited to science courses, but PSD believes that environmental education should be implemented into many subject areas. High school students have the opportunity to choose from a wide variety of science electives for environmental education, but there is also a social studies elective, Environmental Issues, that allows students to explore the development of the environmental movement

and current issues that impact wildlife preservation, air and water pollution, land use, population, and energy options.

- The 8th grade PBL team at Northeast Middle including math, science, language arts, and social studies has done exceptional work in integrating the U.N Sustainable Development Goals into their curriculum. Students focus on the six goals: Life on Land, Peace, Justice, and Strong Institutions, Industry, Innovation, and Infrastructure, Reduced Inequalities, Zero Hunger, and Affordable and Clean Energy in six week units. The goal is to expand this to teams in both 6th and 7th grade as well, so students learn about all 17 goals. Students engage in hands-on learning by using their large produce garden, bee hives, and chicken coop in connection with the onsite Parkway Food Pantry.
- The Spark! program provides high school students in the Parkway and Rockwood School Districts with dynamic, immersion-based student learning experiences to ensure students can understand and respond to an ever-changing world. Within Spark!, students spend five to eight hours per week working to complete projects that they design or in collaboration with business partners to solve real-world problems. There are six strands including bioscience, engineering, pre-professional health sciences, teaching and learning, technology solutions, and a sports medicine strand that will be available in 2020. Students in these strands shadow industry professionals, participate in internships, complete projects, and gain exposure to a variety of career fields
 - Spark! Bioscience students are frequently working on environmental service projects and working to solve complex environmental issues. These students have the opportunity to work at a local wildlife rescue center to support their operation, educate visitors, perform habitat restoration, invasive plant species removal, and water quality testing. They visit urban farms, rooftop gardens, and a recycling facility. Students have the opportunity to participate in the Forest Park Box Turtle project by tracking turtles and collecting data. Spark! Bioscience is held within the Danforth Plant Science Center and students shadow researchers solving global crop yield issues.
- Each year, PSD partners with the Missouri Regional Chamber of Commerce's Show-Me Careers program for high school teachers to spend five-days learning about relevant career pathways in advanced manufacturing, technology, health care, and other high demand industries. The program assists educators in producing lesson plans that are presented to students the following year. High school teachers also have the opportunity to visit local organizations and areas of interest that may be used for class field trips such as the Endangered Wolf Sanctuary, Missouri Botanical Gardens, Shaw Nature Reserve, and the EPA Superfund site at the West Lake landfill.
- PSD holds a two-day STEM fest each spring during the district science fair. During this event, 3,000 families with students from kindergarten through 12th grade participate in a wide variety of STEM activities led by local organizations and community members. These organizations have included the Challenger Learning Center that helps students make rockets, the Magic House, the St. Louis Astronomical Society, and the St. Louis Science Center. Students participate in design-build challenges using recycled materials, learn to create apps to improve their school community, use a 3D printer, and engage in a virtual reality station.
- STEM Saturdays is a program hosted by PSD that engages 3rd through 8th grade students and staff from Parkway, Normandy Schools Collaborative, and Crawford County in STEM learning opportunities each Saturday in February. Professional development sessions around STEM education are available for all teachers and various community organizations provide activities for students including Parkway's contracted architecture firm.
- Each high school has a Robotics Club that competes regionally and some that compete nationally. There are teams at many Parkway schools that participate in the underwater robotics U.S Navy program, Sea Perch. Spark! Engineering students mentor younger students and even coach elementary student teams.

- Beyond the classic science courses, high school students have a wide variety of STEM electives, AP classes, and environmental science classes to choose from that allows for each student to find courses that interest them. These electives include AP Environmental Science, Evolution and Ecology, Biotechnology and Systems, Biotechnical Engineering, Earth Systems, Environmental Science, Forensic Science, Zoology, and Principles of Biomedical Science. These electives include High school students are required to have at least three years of science courses to graduate.
 - At Central High, the students in Environmental Science participate in project based learning surrounding current environmental issues. The class is framed around current events and students lead discussions surrounding an area of interest with proposed solutions. Students have conducted energy audits, acid rain demonstrations, and invite guest speakers to learn about local issues. The class partnered with the St. Louis Science Center to create updated versions of life sciences labs for the Science Center and helped other Parkway elementary and middle schools test the experiments. As a part of the class, students are required to create a publicly shareable awareness campaign to increase sustainability learning throughout the school.
- PSD is moving toward a Personalized Learning for all students to engage students in authentic and meaningful learning experiences that meet Missouri standards. Sorrento Springs Elementary will pilot the program during the 2020-2021 school year with all elementary, middle, and high schools to follow. Some schools have instituted “Genius Hours” for work on passion projects and/or PBL units to begin the transition to a new flow of learning. The goal of Personalized Learning is to allow students to work on interdisciplinary projects to solve real-world problems of their choice. The key to this program is flexible class timing to allow for interdisciplinary collaboration instead of rigid class schedules and allows passions, interests, and extracurricular work to become part of the classroom learning experience.



Students renovate an overgrown outdoor classroom



Claymont Elementary held a Walk to School day to address student health and transportation related emissions



Students planted a pollinator garden for their Green Schools Quest project to be used by the whole school



All students at Pierremont Elementary participated in a No Power Hour challenge in October by going outside or reading using natural light for an hour every day.



Students brought in old Halloween pumpkins to compost in their school garden. They made observations about the decomposition of the whole pumpkin compared to a cut up pumpkin.



Students cleaned up their campus and collected over 150 lbs of trash from the nearby woods and creek area.