



School Nominee Presentation Form

ELIGIBILITY CERTIFICATIONS

School and District's Certifications

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

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

U.S. Department of Education Green Ribbon Schools

Name of Principal:

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

Official School Name:

(As it should appear on an award)

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

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

(Principal's Signature) Date:

Name of Superintendent:

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



District Name:

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

(Superintendent's Signature)

Date: March 11, 2022

Nominating Authority's Certifications

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

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

Name of Nominating Agency:

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.

Date:

(Nominating Authority's Signature)

SUBMISSION

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

OMB Control Number: 1860-0509

Expiration Date: December 31, 2023

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.

Summary Narrative: An Overview

In May 2008, the Richmond Public Schools (RPS) approved the Patrick Henry School of Science and Art's (PHSSA) charter in the City of Richmond - the first public elementary charter school in Virginia and the fourth charter school in the Commonwealth of Virginia. We are a proud and fully accredited member of the RPS academic family. As a partner of RPS, PHSSA is a self-governed school, open to all families residing within the city of Richmond. Charter schools are public schools that are granted autonomy to operate independently of local school policies. With this independence, administration and educators have the freedom to create new curricula and methods of teaching and learning while remaining committed to superior levels of academic achievement.

Built on Virginia's Science Standards of Learning, PHSSA increases and enhances RPS' educational program options. In 2017, administration added a full-time Environmental Studies teaching position to enhance the school's mission and curriculum. The school's year-round schedule (quarters rather than semesters) allows the teaching staff to gather data quarterly about students, assessments, and teaching methods. Arts are celebrated and integrated throughout PHSSA's curriculum and provide students the opportunity to explore and experience creative expression through drawing, painting, playwriting, dancing, and music. Programs include the University of Richmond Partners in the Arts, Kid Pan Alley, Dancing Classrooms Greater Richmond, and Dogtown Dance Theatre.

Based on research that shows increased student achievement with increased parental involvement, PHSSA has included family involvement contracts as an enrollment expectation. Families are required to contribute six hours of time per quarter. In addition, PHSSA has a required dress code for all students. One benefit to the school is its proximity to Forest Hill and James River Parks that provide an environmental learning environment distinct from other Richmond public schools. PHSSA's mission is to cultivate students' maximum growth and develop stewardship through a premier environmental and arts education. PHSSA is committed to providing a rigorous and engaging kindergarten through fifth grade curriculum based on meaningful educator, student, family, and community involvement. Parents and local businesses work together to benefit the students. Parents are building a Little Lending Library for the school grounds. Parents have also placed a Lost & Found Bin outside the school, where it can be accessed daily and/or on the weekends. In 2021, parents raised more than \$2,000 and orchestrated two initiatives to add 10 picnic tables and tree stumps to support outdoor learning.

PHSSA has come a long way in 14 years, growing enrollment from 149 students in 2010 to 320 in 2021. The January 2012 physical journey meant moving from a temporary church location to the permanent school building located at 3411 Semmes Avenue. The 100-year-old building had to be compliant with the Americans with Disabilities Act (ADA) – not a small feat! Since our critical Phase I renovations, we have added four classrooms, completed the renovation of our auditorium, and added four modular classrooms. Recently, the final phase of our renovation focuses on the third floor, where there are ten additional classrooms. This renovation supports environmental initiatives wherever possible, such as LED lighting to replace fluorescent fixtures, interior storm windows, and water fountains with bottle fill stations.

All of this puts PHSSA at the forefront of reducing environmental impact, promoting health and wellness, and providing environmental and sustainability education. It should come as no

surprise that PHSSA has appeared on the Richmond-Times Dispatch Top Places to Work in RVA.

Goal Area 1: Efforts to Reduce Environmental Impact and Cost

1A: Energy Savings and Efficiency

Our facilities have been upgraded during renovations to reduce environmental impacts and costs. The windows along the front of the building were rebuilt/replaced with the original materials to preserve the historic integrity. These are all single pane glazed wood windows. The windows on the side and back of the building did not have to keep the historic appearance, and they were replaced with double pane insulated glass. Fluorescent light fixtures have been replaced with LEDs that use less electricity and last longer. Five classrooms and office spaces on the basement level of our school facility are equipped with motion detectors for lights to reduce energy consumption. The chilled water pump was replaced in 2021. Additionally, touchless hand sanitizers and paper towel dispensers are installed in bathrooms outfitted with high efficiency, water saving plumbing fixtures.

The final phase of our renovation focuses on the third floor, where there are ten additional classrooms. The third floor has many energy and water saving features. We have purchased efficient led lighting to replace the damaged and dangerous fluorescent fixtures throughout the third floor. This will make an enormous impact on energy usage. 70 Indow® interior storm windows were purchased for the entire back of the building. Interior storm windows are widely recognized as a tool for making existing windows energy efficient. This saves waste by keeping windows out of the landfill and also helps preserve the value of historic structures. The windows improve the energy efficiency of the old windows to roughly the equivalent of modern double pane insulated windows.

Indow's® awards for energy performance include: CleanTech Open: National Energy Efficiency Award (2011), Green Award from Door & Window Market Magazine for being an "Overall Energy Saver" (2014), and Edison Awards: Bronze in Energy Efficiency category (2011). Data from two studies done by Portland State University's Green Building Research Laboratory and the U.S. Department of Energy showed that Indow® inserts lead to a nearly 20 percent reduction in energy use, considerably higher than the 10 percent reduction originally predicted by energy modeling. This is directly tied to the thermal comfort benefits: Indow® inserts change the mean radiant room temperature by increasing the windows' surface temperature. So not only do the inserts insulate against heat loss, people feel warmer standing next to acrylic than glass and are less likely to turn up the thermostat. We have installed the Indow® interior storm windows in one room and the rest of the windows are projected to be installed before the end of the year.

The Garden Committee and volunteers coordinate planting vegetation and upkeep of trees and our Solar Garden to help to reduce the heat island effect.

1B: Improved Water Quality, Efficiency, and Conservation

Proper hydration is a critical component of student success. The Centers for Disease Control and Prevention (CDC) reports that United States youth who drink less water tend to drink less milk, eat less fruits and vegetables, drink more sugar-sweetened beverages, and get less physical activity. Drinking water can also prevent dehydration, a condition that may result in unclear

thinking, mood change, and body temperature increase. Water conservation is taught to minimize unnecessary water usage in consideration that the U.S. demand for water has tripled in the last 50 years. Recycling and energy conservation are also ongoing initiatives.

One initiative to reduce environmental impact and costs is the installation of school wide energy efficient water stations, also referred to as “Hydration Stations.” The importance of providing safe drinking water in schools during mealtimes is part of the standards and regulations set forth by the Environmental Protection Agency. This initiative resulted from parent demand and dedicated support from the School Planning & Management Team. Traditional water fountains can be a breeding ground for germs and other hazardous contaminants. The link between hydration and learning is impactful for students’ energy levels and brain function by helping to decrease the frequency of headaches, anxiety, and fatigue. The CDC reports that U.S. youth who drink less water tend to eat fewer fruits and vegetables, eat more fast food, and get less physical activity. A focus on hydration helps to foster healthier habits in students. Water is the key to maintaining proper hydration and keeping students healthy.

These modernized water fountains are low profile, wall-mounted bottle fillers provide hygienic, filtered water. The hydration stations all feature easy, touch-free access for the PHSSA students and staff while significantly reducing water waste. The hydration stations are practical, low-maintenance water bottle fillers. The refill stations encourage students to use environmentally friendly containers instead of disposable plastic bottles. Having hydration stations easily accessible throughout the school facility reduces the usage of single-use water bottles. For several years, eco-friendly water bottles have been prioritized as a school supply item for all grade levels at PHSSA. The refill stations have been a transformative technology due to its ability to enable the PHSSA students and faculty’s access to a sugar-free drink alternative that is germ-free, waste-free, and lead-free. Students and staff at PHSSA do not have to wait in line to fill their water bottles; the average fill time for a water bottle is only six seconds. The technology is touchless. When a bottle is placed near the sensor, it begins to fill. When the bottle is removed, it automatically stops. There is also a safety feature that shuts the flow off after 20 continuous seconds of use. These features allow for the reduction of water and electrical energy usage. The water supplied by hydration stations is carbon filtered to exceed the standard set by NSF/ANSI 53 certification requirements. The carbon filters also eliminate the taste of chlorine and increase the overall quality of the drinking water. Filters are easily replaced and can be used for up to 3,000 gallons.

In perspective, it is the equivalent of reducing the use of 20,000 single-use water bottles. To date, PHSSA has replaced the filters three times. The top three benefits of this initiative include more reusable water bottles used during the school day, an overall decreased usage of disposable water bottles, and a reduction of partially used disposable water bottle trash left around the school. The school to date has saved 51, 564 bottles. This effort aligns with our Art teacher’s efforts to emphasize the importance of reducing single-use plastics. This concept will be expanded when our art teacher organizes a team of students to participate in an Annual Marine Debris Program Art Contest designed to bring awareness to ocean debris and single-use plastics as a global issue.

In another effort to conserve water, PHSSA installed rain barrels to catch runoff from our modular classrooms. The water from the rain barrels is used in the Butterfly Garden, Bayscape

Terrace, and Victory Gardens. Each year RVAH2O and the Department of Utilities host a rain barrel design contest for elementary students. Third grade classes, as part of our Environmental Studies' Water for All/Watersheds unit, entered the contest and PHSSA students voted on designs during our Science, Technology, Engineering, Art, and Math (STEAM) Fair. The year we participated, a fourth-grade student won the school- and district-wide contest. The class prepared the barrel, and the student painted it based on their original design. The rain barrel will be mounted for use in our gardens.

PHSSA also has a Rain Garden. Established in 2011 and completed in 2013, the Rain Garden provides water quality improvement for Reedy Creek through the filtration of stormwater runoff from the paved areas surrounding the school building. Fourth graders observed and measured the effectiveness of the garden through water quality sampling and analysis. They also maintained the plantings and watered and weeded the garden twice weekly, depending on weather. Because of COVID, the garden was not tended to the way it normally was; however, the Garden Committee is working with a consultant certified in Ecological Restoration to add at least 100 Virginia native plants sustainably sourced from natural populations to our Rain Garden. This initiative will see the addition of at least seven *Chasmanthium latifolium* (River oats) and 12 *Asclepias incarnata* (Swamp milkweed). This kind of space and others on the grounds have helped to make PHSSA a Certified Wildlife Habitat.

Parents worked with Richmond ToolBank to add ten ergonomic picnic tables throughout our Victory Gardens and one of our outdoor learning spaces. Parents also worked alongside Truetimber Arborists, Inc., COLAB, and CARRVA to sponsor another outdoor learning space to include 20 "seat" stumps and 20 "table" stumps.

1C: Reduced Waste Production

Recycling containers are placed throughout the interior building to collect recycling materials. Our recycling container is picked up once or twice weekly and is usually full. PHSSA averages 16 trash bags daily. The slight increase from 2019 where we averaged 12 trash bags daily is because of protocols related to COVID that necessitate changing bags more frequently.

Our custodial staff have been outfitted with Rubbermaid® carts and state of the art cleaning supplies, including ergonomic vacuums and mops and microfiber cleaning cloths. The mopheads and microfiber cleaning cloths are collected every two weeks by Cintas Uniform Services to be sanitized and reused.

PHSSA serves families that are enthusiastic about reducing, reusing, and recycling, and they often work collaboratively with teachers and staff to reduce our collective carbon footprint. In response to the increase in trash on site, one school family began visiting the playground after school to clean up. Other families began to join. A weekly sign-up was emailed to current school families, and within a week, every time slot was filled. Feedback from current families indicates that they enjoy being an integral part of promoting environmentally sound practices by providing weekly clean-ups and want to continue volunteering their time and efforts. Families are also conscious about the products that they buy and try to minimize the amount of new clothes purchased. Using social media posts on our school webpage, families began giving away uniforms that their children had outgrown. It became so popular that the PTA decided a large-

scale uniform exchange would be successful. Every year at the annual Open House event or the first PTA meeting, PHSSA hosts a uniform swap. It allows families to feel good about passing down their used uniforms, saves families money without having to purchase new uniforms, and also keeps loads of clothing out of landfills – something we can all feel good about!

We encourage families to purchase school supplies that are post-consumer material and/or recycled. While it's not a written policy, PHSSA is committed to purchasing post-consumer material whenever possible. Pre-COVID, the school participated in “No Worksheet Wednesday,” where homeroom teachers implemented activities and homework that did not require the use of paper. PHSSA has plans to revisit a similar initiative in 2022. Our Board of Directors and administration send surveys and forms in electronic form whenever possible to reduce paper use.

The fourth grade added compost to the Rain Garden as needed that was produced through the school wide composting program that the fourth and fifth graders worked on in conjunction with volunteers from the University of Richmond GreenUp Team. Fourth and fifth graders ensured that other grades placed the weeds and compostable material in the bins. The production of compost teaches students about ecology, microbiology, and sustainable agriculture and also allows the plants in PHSSA’s gardens to grow healthy without artificial fertilizers that can leach into Reedy Creek causing harm to the watershed. As a result of these efforts, PHSSA won the James River Green Building Council Connect the Dots: Green Schools Challenge Award for Outstanding Sustainability Curriculum for 2012 - 2013 and 2013 - 2014. More compost initiatives are planned in collaboration with student volunteers from the University of Richmond GreenUp Team.

1D: Use of Alternative Transportation

PHSSA encourages an efficient carpool and student pick-up system. To minimize cars idling, PHSSA has provided caregivers with cards with the names of the child(ren) and homeroom teacher(s) so that children can be summoned quickly at pick-up.

Families also support the school’s annual participation in Walk to School Day as a fun and engaging way to promote alternative transportation. Walk (and Bike) to School Day coordinators report that events led to changes to policies or the physical environment in their communities – the kinds of changes needed to support safe walking and biking every day, not just for special events. PHSSA will be participating in Bike to School Day for the first time in 2022.

Goal Area 2: Efforts to Promote the Health and Wellness of Students and Staff

2A: Integrated School Environmental Health Program

The health of school staff and students is managed with an eye to environmental responsibility. Hospital grade ventilation systems clean and disperse air, decreasing the likelihood that individuals will inhale particles suspended in the air that are contaminated with the virus that causes COVID-19. PHSSA uses Carrier OptiClean HEPA Filtration Air Scrubbers in all classrooms, common areas, and school offices. Custodial staff also use a wireless charging blue light Nano-Atomizer. The Nano-Atomizer is a handheld thermal dry fogger that will emit a dry disinfectant solution. The fog emitted has a 99% disinfection rate, non-allergic, and safe to use around children.

James River Heating, Air Conditioning, Plumbing, & Electrical visits the school twice monthly for routine inspections to ensure that systems are clean and running properly. James River Heating, Air Conditioning, Plumbing, & Electrical also ensures that classrooms and spaces are ventilated consistent with applicable ventilation codes and standards. Our custodial staff have been outfitted with hazmat suits and PPE and have been trained to contain contaminants and mitigate exposure to staff and students. Our custodial staff performs daily walk-through inspections to control moisture and clean/remove moldy materials promptly when found. If a situation necessitates intervention, our custodial staff will contact administration.

PHSSA reduces the presence of pests by implementing an organic approach to Integrated Pest Management (IPM), an environmentally sensitive approach that relies on a combination of practices. The Garden Committee practices IPM by setting thresholds – recognizing that the presence of pests may not necessitate intervention; practicing preventative cultural practices like cleaning shears, crop rotation, and removal of diseased plants; monitoring and tracking pests before intervening; employing mechanical controls like hand picking and traps; and considering biological controls like companion planting to encourage parasitic wasps, ladybugs, and praying mantis.

2B: Nutrition and Fitness

PHSSA has made numerous efforts to improve the health and wellness of students and staff by integrating an environmental health program and promoting sound health and wellness practices. Recently, in the Farm to School subcommittee of the Richmond Public Schools School Health Advisory Board Nutrition Committee, it was decided that school garden produce can be served. A member of the PHSSA Garden Committee and parent at our school is developing the protocols and standard operating procedures. It is our hope that draft materials will be submitted by March so we can have approval from the Virginia Department of Health by spring.

PHSSA provides every student with physical education that meets or exceeds the expectations of the VDOE Physical Education SOLs and teaches the skills needed to achieve and maintain a health-enhancing level of personal fitness and develop the knowledge, attitudes, behaviors, and confidence needed to be physically active for life. A program of physical activity is provided for all K-5 students consisting of at least 60 minutes per week during the school year. All K-5 students have recess that includes at least 30 minutes of unstructured play each day. Outdoor recess is offered when weather allows for outdoor play, unless the temperature is below 35 F or above 95 F, inclusive of wind chill factors and extreme weather conditions. If a teacher must conduct indoor recess, teachers and staff follow the indoor recess guidelines that promote physical activity for students.

Our Physical Education director organizes and implements RiverRomp, an annual multi-sport event made up with teams of select fourth and fifth graders. Qualifying for RiverRomp is a holistic exercise. Students submit an application, log approximately ten hours on their bikes, complete a public service activity, take orienteering and kayaking classes, and document five hours of community service. Students participated in a multi-sport race that took them on 8.5 miles of the James River Park System. The race involved running/hiking, mountain biking, kayaking, orienteering, and team building. RiverRomp forged relationships with community partners, and nurtured cross-grade level relationships. The event also heightened our students'

appreciation for and comfort level in the natural spaces immediately surrounding our school. PHSSA families are eager to meet the unique set of challenges COVID presents with regards to implementing this initiative in 2022.

PHSSA also implemented Run for the Arts, a biannual event that allows all K-5 students to fundraise by asking community members to sponsor them. Sponsors are given the option of donating money for every lap or donating a lump sum. Students are given a few weeks to ask for support from sponsors, then the entire school meets to run for the arts. Family and community members come to support the students. Run for the Arts has raised enough funds to purchase STEM (Science, Technology, Engineering, and Math) Bins for every grade level classroom to be used to supplement instruction during small groups and/or enrichment times. Homeroom teachers are provided clear bins with assorted materials including toothpicks, Play-Doh, dominoes, and Velcro, to use in conjunction with task cards. Enrichment and calm down task cards are also made available to homeroom teachers. STEM Bins are an ideal hands-on solution for early finishers, morning work, stations, fine motor practice, or makerspaces. They are also a creative and developmentally appropriate form of engineering for elementary students. The STEM Bins could also be used for indoor recess, teambuilding, calm down centers, or positive reinforcement of behavior. The STEM Bins also serve as an incentive tool for teachers at the homeroom level and allow students to self-regulate while also nurturing STEM foundational skills. Proceeds from the next Run for the Arts will fund more initiatives to improve the overall health and wellness of our students.

All fourth and fifth graders also experience physical activity outlets during annual bike, rock climbing, and/or kayaking field trips. One fourth grade teacher also hosted monthly Hip Hop Zumba. Hip Hop Zumba occurred monthly and allowed the kids to participate in exercises while also listening to hip hop music. The teacher would play hip hop music and the students would follow her in doing exercises. Different students are invited to become the instructor while other students followed. This instills a sense of leadership in the students while doing something fun.

Pre-COVID, teachers participated in after-school yoga with a certified instructor. Not only did this initiative serve to improve the health and well-being of staff, but the instructor also taught us simple and effective ways to implement what we learned with our students in the classroom. The exercises and breathing techniques learned require no more than five to ten minutes to complete and allow students and staff to center and calm themselves in a joint experience at any point in the day. At the end of the training, the instructor provided a list and description of poses, breathing techniques, and books that could be referenced as needed for individual staff members and/or classroom use. A second grade class presented poses and breathing techniques learned during a Friday Morning Meeting. Wellness activities support health program cost reductions through positive employee engagement programming.

Our fifth graders experience ballroom dancing with Dancing Classrooms Greater Richmond, which uses a curriculum-based teaching approach to achieve social awareness and build self-esteem. Students are taught the vocabulary of various contemporary social dances in a classroom setting and each class in the series introduces new steps, reinforcing what has been previously learned through practice and repetition.

Our school counselor provides meaningful and engaging Second Step and monthly character lessons. The Second Step program is a web-based social-emotional learning (SEL) curriculum that allows for consistency from classroom to classroom and easily scales across schools and districts. Its digital format enables continuous improvement based on up-to-date research and feedback. The Second Step Elementary digital program is designed to adapt to students' needs in teacher-facilitated group settings where students connect with the content, each other, and the teacher as they build new social-emotional skills. The variety in media, activities, and interactive components helps engage every learner and provides opportunities for culturally relevant teaching. The look and feel of each grade's lessons evolve as students grow into new developmental stages.

Our school counselor also initiated the procurement of Big Life Journals for all 3-5 students during the pandemic when a need for an emotional outlet was paramount. Big Life Journals offer science-based journals for students to help them grow their confidence and resilience. The journals feature engaging activities, inspiring stories, and colorful illustrations meant to encourage resilience, gratitude, and self-love. The journals are peer-reviewed by child psychologists and based in science. Children who use our journals and other resources have been shown to develop higher self-esteem, greater resilience, strengthened love of learning, lessened fear of failure, and willingness to take on challenges.

In addition to Second Step and monthly character lessons, our school has partnered with an outside agency to provide therapeutic support for students with behavioral concerns. Therapeutic Day Treatment provides a combination of therapeutic services and evaluation within the traditional school setting for students exhibiting emotional and behavioral concerns that hinder their ability to function successfully in the school environment. Therapeutic Day Treatment counselors work with students in the educational setting to decrease disruptive behavior, increase focus, assist students in exhibiting age-appropriate classroom behavior, and other emotional/behavioral needs. The goal of the Therapeutic Day Treatment partnership is to support students and teachers, allowing all students to learn and teachers to teach. The overall impact of Therapeutic Day Treatment is the reduction of administrative removals of students from the classroom environment, reductions of office referrals, and prevention of out of school suspensions. The presence of Therapeutic Day Treatment saw an increase of handling disruptive behaviors at the classroom level and a decrease in suspensions.

PHSSA's school nurse:

- Participates in work of health education committee and serves as a health education resource person to staff and students.
- Prepares and distributes health topic bulletins to students, staff members, and parents.
- Conducts school programs of immunizations, physical examinations, and sight and hearing testing as directed by Coordinator of School Health Services.
- Conducts medical case finding, screening, and referral activities related to health defect of selected students.
- Observe students on a regular basis to detect health needs.
- Maintains up-to-date cumulative health records on all students.
- Refers parents of pupils needing medical care to appropriate private or community resources.

- Reports to parents, school personnel, physicians, clinics, and other agencies on student health matters, as directed by the Coordinator of School Health Services.
- Provides emergency nursing services for sick or injured students at school.
- Notifies parents of students about illnesses, physical defects and potential health problems and provides health counseling.
- Assumes authority, in the absence of a physician, for the care of a student or staff member who has suffered an injury or emergency illness.
- Administers first aid in accordance with established first aid procedures.
- Implements Board policy on exclusion and readmission of students in connection with infectious and contagious diseases.
- Prepares mandated health and developmental workups and updates on all special education students as assigned.
- Provides appropriate follow through with special education students, parents and staff and apprises IEP team of medical problems of special education students as assigned.
- Assists with verification of selected student absences by home or telephone contacts with parents.
- Participates in in-service training programs.
- Assists school personnel in maintaining sanitary standards in schools and the identification and correction of safety and health hazards in schools.

Our school nurse also conducts handwashing seminars twice a year for all K-5 students, implements the KickStart nutrition program and teaches UV protection and skin health for all K-5 students, provides puberty and hygiene lessons (with caregiver consent) for all fifth graders, provides EpiPen and asthma training for all staff once a year, and identifies asthma triggers when a student or staff member is affected.

Our school enjoys Friday Morning Meetings. Friday Morning Meeting is a schoolwide initiative that brings the entire school body together once a week. Pre-COVID, parents and community members were encouraged to attend. During these meetings, general information is disseminated by administration and staff as appropriate, one class would showcase their current learning experiences, Caught Ya's were announced, and one fifth grader would deliver a VIP (Very Important Principle) Speech. Class showcases have included reenactments, short skits, simulations, yoga, singing, art. These showcases have inspired other classrooms and encourage cross grade level relationships. Caught Ya's recognize individuals' efforts, to include the efforts of staff members, to improve the culture and climate of the school. The Principal and Vice Principal announce the individual's name and what was accomplished to earn the Caught Ya. Caught Ya's improve social emotional health, self-regulation, and self-concepts. By honoring core values of the school, students' behaviors and self-images are shaped and celebrated. VIP Speeches give fifth graders the opportunity to present a principle to which they feel a personal connection. Fifth graders select a principle with the help of a teacher, then connect the principle to a personal experience(s), and also provide a quote to help better explain the principle. Past principles have included honesty, determination, integrity, and authenticity. Homeroom teachers select students to be mentioned during Caught Ya's based on the current VIP. For example, if a fifth grader delivered a speech about integrity, a homeroom teacher may choose to select a student for a Caught Ya who returned a lost item of value to the office. Our first virtual Friday

Morning Meeting was a huge success and the school community is looking forward to more in the future.

One of the most important ways PHSSA supports the health and wellness of students is by implementing the requirement of family involvement hours. Based on research that shows increased student achievement with increased family involvement, PHSSA has included family involvement contracts as an enrollment expectation. PHSSA offers multiple ways in which families can satisfy the involvement requirement. Some opportunities are available during the day, some in the evenings, and some on weekends. PHSSA maintains an Involvement Coordinating Committee to assist families in meeting their involvement requirement. The standard for successful completion is for the family to meet the requirement.

At each Leadership Meeting, our principal encourages staff to uplift one another by recognizing each other's strengths and accomplishments. This exercise encourages a collaborative mindset.

Goal Area 3: Efforts to Ensure Environmental and Sustainability Education

3A: Shared Responsibility for Environmental Learning

PHSSA added EL Education K-8 Language Arts curriculum as part of the integrated curriculum. The EL Education K-8 Language Arts curriculum is a comprehensive, standards-based literacy program that engages teachers and students through compelling, real-world content. Created by teachers for teachers, the highly-acclaimed curriculum draws on EL Education's 25 years of experience in engaging teachers and students in active and meaningful learning. The curriculum promotes a three-dimensional view of student achievement--mastery of knowledge and skills, character, and high-quality work. EL Education was born from a partnership between Harvard Graduate School of Education and Outward Bound, USA. They joined the character-infused philosophy of Outward Bound founder Kurt Hahn, which focuses on teamwork, courage, and compassion with an active approach to learning crafted by leading Harvard scholars and created 10 founding principles for the EL Education model:

1. **The Primacy of Self-Discovery**
Learning happens best with emotion, challenge, and the requisite support. People discover their abilities, values, passions, and responsibilities in situations that offer adventure and the unexpected. In EL Education schools, students undertake tasks that require perseverance, fitness, craftsmanship, imagination, self-discipline, and significant achievement. A teacher's primary task is to help students overcome their fears and discover they can do more than they think they can.
2. **The Having of Wonderful Ideas**
Teaching in EL Education schools fosters curiosity about the world by creating learning situations that provide something important to think about, time to experiment, and time to make sense of what is observed.
3. **The Responsibility for Learning**
Learning is both a personal process of discovery and a social activity. Everyone learns both individually and as part of a group. Every aspect of an EL Education school encourages both children and adults to become increasingly responsible for directing their own personal and collective learning.
4. **Empathy and Caring**
Learning is fostered best in communities where students' and teachers' ideas are respected and where there is mutual trust. Learning groups are small in EL Education

schools, with a caring adult looking after the progress and acting as an advocate for each child. Older students mentor younger ones, and students feel physically and emotionally safe.

5. Success and Failure

All students need to be successful if they are to build the confidence and capacity to take risks and meet increasingly difficult challenges. But it is also important for students to learn from their failures, to persevere when things are hard, and to learn to turn disabilities into opportunities.

6. Collaboration and Competition

Individual development and group development are integrated so that the value of friendship, trust, and group action is clear. Students are encouraged to compete, not against each other, but with their own personal best and with rigorous standards of excellence.

7. Diversity and Inclusion

Both diversity and inclusion increase the richness of ideas, creative power, problem-solving ability, and respect for others. In EL Education schools, students investigate and value their different histories and talents as well as those of other communities and cultures. Schools and learning groups are heterogeneous.

8. The Natural World

A direct and respectful relationship with the natural world refreshes the human spirit and teaches the important ideas of recurring cycles and cause and effect. Students learn to become stewards of the earth and of future generations.

9. Solitude and Reflection

Students and teachers need time alone to explore their own thoughts, make their own connections, and create their own ideas. They also need to exchange their reflections with other students and with adults.

10. Service and Compassion

We are crew, not passengers. Students and teachers are strengthened by acts of consequential service to others, and one of an EL Education school's primary functions is to prepare students with the attitudes and skills to learn from and be of service.

PHSSA also added MobyMax as a part of the integrated curriculum. MobyMax is the only completely integrated curriculum and teacher productivity system. All subjects and student data work seamlessly together. MobyMax finds and fixes learning gaps with the power of personalized learning. MobyMax's adaptive curriculum creates an individualized education plan for each student, allowing gifted students to progress as quickly as they like while simultaneously ensuring that remedial students get the extra instruction they need. Scope and sequence and all reporting flow from common core standards. Moby allows you to monitor student progress in real time so that you know exactly how each student is doing. Moby Curriculum teaches students to be better problem solvers, critical thinkers, and creative geniuses with thousands of cognitive skill manipulatives. Moby has students think and discover rather than just be told. Students are more engaged, gain a deeper knowledge of concepts, and retain information better. PHSSA teachers use MobyMax to support Science and Social Studies standards during small group instruction and also encourage families to explore the website at home to support learning.

These curricula and EL principles support PHSSA’s mission to cultivate students’ maximum growth and develop stewardship. PHSSA teachers also design and implement grade-level Project Based Learning (PBL) opportunities for all K-5 students as an educational component within its charter. PBL allows students to learn by actively engaging in real-world experiences culminating in a final project. When provided with a real-world problem or complex question, students research, collaborate, create, and critically think to demonstrate their knowledge while creating a product or presentation. Each year, students participate in at least one PBL opportunity. As part of the integrated curriculum, students focus on current environmental issues and develop real world solutions to these problems. Working in collaboration with our Environmental Studies teacher and community partners, homeroom teachers work to connect concepts of sustainability and environmental awareness in PBL. The approach students use in the elementary school level is the problem-based model: determine the problem, research the details, create solutions and work to fix the problem. Some examples of PBL in the past include: Eco-Writers & Pollinators, School Food Activism & Container Gardens, and Species Survival & Animal Habitats.

Partners in the Arts (PIA) provided a grant that has helped move the school toward the mission of offering a unique integrated curriculum in utilizing the river and park system adjacent to the school and weaving the vital aspect of creativity through the arts. Through the partnership with PIA and visiting artists, PHSSA has made art and science an integral part of the students’ educational experience from kindergarten through fifth grade with Discovery Fridays. By connecting language arts, math, science, and social studies to art, these students, parents, teachers, and community members have just begun tracing Reedy Creek Watershed and their community. One project saw 350 students working together, moving along Reedy Creek, learning about their watershed, and gathering hundreds of pounds of trash. The day’s events were part of the ongoing project, “We Traced a Creek with More Than Our Hands,” which brought PHSSA, University of Richmond’s Partners in the Arts, and local artists together to work with students as they explored the intersections of science, art, and community activism.

For one part of the project, Trash as Artifact, Fiction as Fact, students learned about pollution, the local ecosystem, and practiced archeological methods while cleaning up 266 pounds of trash alongside the creek. Throughout the day, students worked with teachers, parents, a visiting archeologist, and master naturalists. After students picked one artifact from the collected trash, they labeled their found artifact (becoming “art archeologists”). The labels included what the object was, how long it had been in the ecosystem, and a fictional story about how the students thought it ended up in the creek. For another component of the project, Invasive Paper, Native Encyclopedia, students researched and studied about native plants, then harvested invasive species in order to learn to make paper by pulping the dried plants with shredded paper from discarded books. The student-made paper and summary of facts were bound together to create an encyclopedia of native and invasive species in Virginia. The book is included in the Main Branch of the Richmond Public Library’s permanent collection. Another important product outcome is the production of the 250 pinhole cameras. Through the collaboration of Capital One volunteers and HandsOn Greater Richmond, pinhole cameras are created, one for each student. Students learn about the math and science used to create images using the pinhole cameras. On one event, all students gathered around the creek and simultaneously opened their cameras and captured the essence of the creek for two minutes. Not only did these cameras capture amazing and interesting perspectives of the creek, they can be used again or shared with other schools. These two

products were among five that were part of an exhibit at Capital One. Giving the students a public forum to show their learning increased the quality of products and improved the pride and community in the school.

There were dramatic increases in student achievement as measured by Virginia Standards of Learning (SOL) assessments for math and the Phonological Awareness Literacy Screening (PALS) shown in the following tables:

Math SOL Scores

	Grade 3	Grade 4	Grade 5
2012 - 2013	35%	55%	19%
2013 - 2014	46%	64%	71%

PALS

	Grade 2, met benchmark	Grade 3, met benchmark
2012 - 2013	63%	75%
2013 - 2014	90%	89%

The PIA project also brought attention to teaching and learning for our teachers. With over six professional development sessions added to the calendar of professional development, teachers learn more about how to incorporate the arts into their everyday classrooms. In these sessions, teachers collaborate not only with their colleagues, but also build professional relationships with community members from Capital One and Altria. Teachers also strengthen their relationships with parents that volunteer on the Discovery Fridays. The grant was essential in the establishment of Discover Fridays, a sustainable model to build on arts integration, forever changing the model of the school at PHSSA. In addition, it has inspired other grants such as the *Yes, Virginia* grant and Kid Pan Alley, which visited our school for seven consecutive years and gave the children an opportunity to connect standards of learning with meaningful and engaging experiences with music and art. Our parents are working alongside teachers to reimagine how these initiatives will look post-COVID.

3B: Use of the Environment and Sustainability to Develop Science, Mathematics, Engineering, and Technology Content

The gardens and grounds are designed and maintained in a manner that promotes the charter goal of environmental stewardship through meaningful outdoor experiences that are fully incorporated into the curriculum. PHSSA provides the children of our diverse community with an academically rigorous science and arts-based curriculum that emphasizes environmental awareness and social responsibility. The gardens are used as outdoor classrooms, and our grounds demonstrate the school's commitment to the environment. The gardens are carefully curated spaces designed to support grade level standards associated with gardening.

One example of the garden space serving to support standards of learning is the Butterfly Garden

Bayscape, which is also a registered Monarch Waystation. By creating and maintaining a Monarch Waystation, we are contributing to monarch conservation, an effort that will help assure the preservation of the species and the continuation of the spectacular monarch migration phenomenon. All second grade students activate prior knowledge when they watch for Monarch and black swallowtail caterpillars and butterflies in the Butterfly Garden Bayscape. Students are introduced to the concept of living and nonliving as well as the basic needs of both plants and animals in kindergarten. The structures and functions of animals and plants that are necessary for satisfying these life needs are the focus of first grade. *Asclepias tuberosa* (butterfly weed) and *Foeniculum vulgare* (fennel) grow in the garden, both plants that serve as food, shelter, and protection for Monarch and black swallowtail caterpillars and butterflies. The central idea is that living organisms interact with other living organisms and their surroundings, and that these interactions allow organisms to meet basic life needs. This concept and the concept of plants and animals undergoing change throughout their lives as they grow and develop is a focal point of the Butterfly Garden Bayscape as we watch caterpillars feed on butterfly weed and undergo metamorphosis. Teachers are encouraged to use the gardens to support formative assessments throughout the school year.

PHSSA exposes all K-5 students to Environmental Studies as a weekly resource. Each classroom has time allotted in the master schedule to receive instruction within the classroom environment or through use of the outside classroom areas. Students participate in lessons provided by the Environmental Studies teacher on topics that support STEAM as well as reinforce Virginia Standards of Learning. Additionally, the Environmental Studies teacher extends learning throughout the classroom environment to include the outdoor classroom, Reedy Creek and other areas within Forest Hill Park (which is adjacent to the school). Students benefit from hands-on nature and interactive lessons. Students and staff also benefit from the Environmental Studies teacher's extensive list of professional development opportunities designed to better inform practices and implementation of integration.

The Environmental Studies teacher participated in a year-long training on global educational practices and leadership training, which culminated in the teacher exchange to Senegal. The research centered around how pro-environmental behaviors is disseminated through communities and how formal or informal environmental education in schools impact that process. Teachers participating in the program spoke with school administrators, government officials, nongovernmental organizations (NGOs) and teachers. After the trip, teachers were tasked to develop a global education guide for educators in their localities, implement lessons that taught global competency, build on the UN Sustainable Development Goals, become a social media presence, offer teacher training, and given access to grants through the US Department of State.

The Environmental Studies teacher also participated in the Transatlantic Outreach program to Germany for STEM teachers. They spent two weeks in Germany touring schools that successfully implemented an integrated curriculum model of teaching, schools that use technology to enhance studies in nature and the environment, and national parks that have environmental education programs, among other things. Teachers then prepared science lessons focusing on modern day Germany.

Our Environmental Education curriculum from the North American Association for Environmental Education (NAAEE) is used for collaboration, communication, other 21st

Century/Global Citizenship skills, development and use of models, STEM challenges, and creating creative thinking. Topics explored are biodiversity and ecosystems, weather, water and climate change, natural resources, energy use and renewables, conservation, sustainability, and advocacy. The fifth grade is also piloting an online Environmental Curriculum, Wourld, a solution-based program that sees scholars actively finding solutions and articulating ways that they can reduce their carbon footprint. The program gives access to individual portfolios and allows the teacher to inform assessments with the material and findings.

Longitudinal research indicates that children that learn in nature are better postured to evolve into environmental activism. Our campus hosts a variety of greenspaces and three outdoor learning areas where students actively engage in outdoor learning experiences involving scientific inquiry and observation. Every student attending PHSSA participates in weekly trips to Forest Hill City Park with their classroom teacher. This weekly experience allows students to make connections between what is taught in Environmental Studies and their science lessons at the classroom level. Students are able to learn about animals and plants native to the area, understand characteristics, and highlight the uniqueness of the seasons and understand interconnections and interdependency of ecological, social, and economic systems.

3C: Development and Application of Civic Knowledge and Skills

Pre-COVID, all K-5 students participated in at least two off-site field trips. Field trips have included visits to Jamestown, Maymont Park and Nature Center, Lewis Ginter Botanical Garden, Brukner Nature Center, New Kent Forestry Center, Full Pocket Farm, Boulevard Flower Gardens, National Aquarium, Science Museum of Virginia, Virginia Museum of Fine Arts, The Children's Theater, Altria Theater, Swift Creek Mill Playhouse, and Metro Zoo. Teachers and staff have also implemented several kayaking, rock climbing, and bicycling events. Fifth grade has visited numerous colleges and universities, and virtual field trips occurred across all grade levels during the 18 months of virtual learning. At least one field trip per grade level has a focus on environmental and sustainability education. Virtual field trips will continue until off-site field trips can safely resume.

Students also learn through Environmental Studies, their homerooms, and in Art the importance of waste management. Students are encouraged to collect items for recycling. Items are reused and/or repurposed for projects or in class storage. In most classes, students are assigned the role of taking recyclables outside to be recycled. Students also collect can tops to donate to the Ronald McDonald House and used markers to be recycled through the Crayola Colorcycle program. Glue sticks and broken crayons are also collected to repurpose. Our school has also recently added repurposed tree stumps donated by Truetimber Arborists that will serve as group work formation seating in a new outdoor learning space.

The Garden Committee oversees planting every year. When classes go to the park every Friday and during Environmental Studies, students learn that through afforestation (planting trees where there were none previously) and reforestation (restoring forests where trees have been damaged or depleted), we are contributing to carbon dioxide removal (CDR) that could avert catastrophic effects of climate change. Students learn that as plants and trees grow, they are trapping carbon dioxide in the atmosphere and turning it into sugars through photosynthesis. U.S. forests absorb about 13% of the nation's carbon emissions. PHSSA also practices no till gardening, meaning

that we leave crop residues in and on the soil, allowing the soil to store more carbon. Children at PHSSA learn in age-appropriate ways at every level the importance of these practices and the implications for our planet.

PHSSA is hosting the first Plant The Moon Challenge team this school year. Participants in the Plant the Moon Challenge join a global science experiment and research challenge to examine how vegetable crops can grow in lunar or Martian soil. PHSSA's team is made up of four kindergarteners, three second graders, and three third graders. Teams receive real soil simulant from the University of Central Florida's CLASS Exolith Lab. Teams will design and conduct a set of experiments using this simulant to grow crops for a future long-duration mission. Teams will use the Project Guide to help define their own experimental parameters, such as the structure of the plant growth setup, amount of water used, and nutrients or fertilizer added to the simulant to support plant growth. After a 10-week growing period, teams submit final project reports and join the global network of researchers helping to expand our space exploration capabilities. Our team will submit a report detailing your experiment setup, parameters, and results to help NASA scientists understand how to use lunar soil to provide nutritious crops for future missions to the Moon or Mars. All participants with completed projects will be invited to showcase their work at a virtual symposium with NASA scientists, program executives, and other dignitaries, where Best-in-Show awards will be presented to teams with the best experiments in a variety of categories.