Rowan Elementary School – Seneca Valley School Disrict
Summary Narrative:

Rowan Elementary is unwavering in its commitment to reducing environmental impact and costs across various fronts. In addressing air quality, a comprehensive plan is in place, including the use of air purifiers in each classroom, fragrance-free policies, and continuous monitoring for mold. Water quality is a top priority, with regular testing for contaminants and the installation of water filling stations. The school takes a proactive approach to recycling, involving students, the cafeteria, and maintenance crew in recycling paper, metal cans, and cardboard, instilling a sense of environmental responsibility. Energy conservation is promoted through an extensive school-energy-saving program, encouraging a culture of awareness and responsibility among students and staff. The commitment extends to health and well-being, supporting local vendors, maintaining an onsite garden, and adopting alternative pest management methods. Chemical storage and disposal on school grounds follow strict protocols to ensure safety and environmental consciousness. Transportation safety is emphasized, providing secure walking paths and bike routes to enhance overall safety and convenience, promoting physical activity, a healthy lifestyle, and sustainable transportation practices. Rowan Elementary's holistic approach underscores its dedication to fostering a green and healthy learning environment, nurturing a sense of environmental stewardship within its school community.

Rowan Elementary School prioritizes the health and well-being of its students and staff through a comprehensive strategy encompassing medical and safety preparedness, social-emotional learning, and community engagement. The school ensures health preparedness by employing a full-time, on-site nurse and providing staff training on essential topics such as administering medical care and responding to emergencies. School Resource Officers, trained in security and community engagement, contribute to a positive school environment. Rowan Elementary emphasizes safety through Act 26 and ALICE training, emergency drills, and advanced security measures, including RAPTOR technology. Social-emotional learning is embedded in daily routines, morning meetings, and LEAD lessons, fostering positive relationships and reducing incidents of bullying. The Positive Behaviors Interventions and Supports (PBIS) initiative recognizes and reinforces positive behaviors, creating a supportive environment. The school offers various mental health support services, including tiered interventions, mindfulness practices, and a sensory room. Monthly guidance counselor-led lessons, partnerships with organizations like Grace Church and the PTA, and community collaborations enhance mental health and overall well-being. Rowan Elementary's commitment extends to physical health, with programs like Girls on the Run, intramural sports, and collaboration with Glade Run for school-based therapy. The school's multifaceted approach underscores its dedication to creating a safe, supportive, and enriching environment for every member of the Rowan Elementary Community.

Rowan Elementary School demonstrates a profound commitment to providing enriching educational experiences that extend beyond traditional classrooms. Guided by a mission to cultivate curious and empathetic solution-finders, the school employs a rich, robust, and immersive K-4 curriculum. A key focus is the comprehensive environmental and sustainable education program, engaging students in hands-on learning about ecological systems, plant life cycles, and sustainable practices. The curriculum incorporates hydroponics, gardening boxes, and composting to instill a deep appreciation for resource-efficient agriculture.

The school utilizes outdoor spaces, such as the courtyard and amphitheater, as dynamic living laboratories for lessons on biodiversity and ecology balance. Projects like "Project Songbird' and the installation

of bird feeders, bat boxes, and owl houses enhance understanding of the intricate relationships between humans and wildlife. A wetland on the campus serves as a living classroom, offering immersive experiences in studying biodiversity. Student initiatives, like “Project Night Moves” and the construction of a bat box, showcase a commitment to conservation and environmental stewardship. The school’s Green Team, formed through collaborative efforts, works to establish sustainable protocols and empower students to connect with global issues and natural resources. Plans for “Green Team Jr.” and hydroponic projects further emphasize environmental education for young learners.

Incorporating environmental themes into various clubs, including the Robotics Club and STEM Club, Rowan Elementary ensures students develop a comprehensive understanding of the synergy between technology, science, and environmental stewardship. The Creativity Innovation Research Center (CIRC) provides a space for creativity and environmental awareness, with students exploring topics like oceans, ecosystems, marine life, and environmental issues.

Across grade levels, students engage in diverse scientific explorations, from studying plant germination and embryology to investigating erosion and the water cycle. Project-based learning units, such as “Project Bat” and “Project Night Moves,” involve collaboration with external partners and contribute to the school’s conservation efforts.

Finally, Rowan Elementary School’s holistic and immersive approach to education, environmental awareness, and sustainability reflects a deep dedication to nurturing well-rounded, environmentally conscious students who are empowered to make a positive
impact on the world.

Pillar 1 Narrative:

In our commitment to fostering a green and healthy learning environment, we diligently address various aspects, including air quality, water, waste and recycling, energy, health and well-being, transportation, and school grounds. Concerning air quality, we actively monitor ambient air conditions and have a comprehensive plan in place for situations where outdoor air may pose risks. Implementing a building-wide indoor air quality management plan, we have equipped each classroom with air purifiers since 2021. Ensuring the availability of outdoor air in all occupied spaces, our custodial staff takes proactive measures to maintain clear outdoor air intakes, replacing filters regularly and maintaining pollutant-free mechanical rooms. Additionally, our maintenance support personnel meticulously manage air dampers, ventilation, and pressure differentials to guarantee optimal air circulation. We enforce a fragrance- free policy, prohibiting air fresheners and consistently monitor our building for mold presence. Regarding water quality, routine testing for lead and other contaminants is conducted, complemented by indoor water audits to assess consumption and faucet efficiency, alongside the installation of two water filling stations at Rowan.

At Rowan Elementary, we proudly run a comprehensive recycling program that involves active participation from students, the cafeteria, and our dedicated maintenance crew. Students enthusiastically engage in recycling paper, contributing to a more sustainable and eco-friendly school environment. Simultaneously, our cafeteria and maintenance crew play a crucial role by recycling metal cans and cardboard. This collective effort underscores our commitment to waste reduction and environmental responsibility, instilling valuable lessons about the importance of resource conservation in our school community. Starting in the 2024-2025 school year, biodegradable trays will be utilized in the cafeteria to support our green initiatives and minimize our carbon footprint.

Moreover, we prioritize energy conservation through the implementation of an extensive school-energy saving program. Our approach is centered on empowering both students and staff to actively contribute to lowering energy consumption. By fostering a culture of awareness and responsibility, we encourage everyone in our school community to adopt practices that reduce energy usage. For example, all Rowan stakeholders are mindful of turning off lights when leaving rooms, lowering blinds, closing doors, shutting off faucets, reporting incidents where equipment is not working properly, and monitoring thermostats to ensure appropriate settings. Through education and engagement, we aim to instill a sense of environmental stewardship, teaching valuable lessons about the impact of energy conservation on our local and global ecosystems. This collective effort aligns with our commitment to sustainability and reinforces the importance of responsible energy practices within our school. To improve energy efficiency, new HVAC and electrical equipment has been installed as well.

In prioritizing health and well-being at our school, we have implemented a range of practices targeted at fostering a wholesome environment. Our commitment extends to supporting local vendors and farmers by purchasing locally produced items, ensuring that our school community has access to fresh and nutritious food options. Furthering our dedication, we maintain onsite garden boxes that serve as valuable resources for cultivating organic produce and the crops are served in the cafeteria. Additionally, we have taken significant steps toward promoting healthier choices by removing vending machines, encouraging mindful consumption. Our school district has mandated a healthy snack initiative so that our children are offered healthy choices during holiday parties and events.

In our pursuit of a safe and eco friendly environment we explore alternative pest management methods opting for the use of least 26 / 70 toxic, target-specific chemicals, preferably in the form of baits and granules. Our approach emphasizes spot treatment and limits interventions to obviously infested areas, prioritizing the well-being of our students, staff, and guests.

At Rowan Elementary, we are dedicated to maintaining safe and environmentally conscious school grounds. To achieve this, we adhere to strict protocols for chemical storage and disposal. All chemical products and supplies are stored in sealed, clearly labeled containers, minimizing the risk of accidental exposure. Proper disposal practices are implemented for chemicals and their containers, ensuring responsible waste management. Additionally, we regularly inspect ground-level intakes to identify and address potential pollutant sources, particularly in areas such as parking lots, loading areas, and bus idling zones located near intakes. By intentionally managing chemical usage and disposal, we contribute to a healthy and sustainable school environment, fostering the well-being of our students and broader community.

In terms of transportation, we promote the safety and well-being of our students by providing a secure and low-exposure walking path and bike route. Our commitment to creating a safe environment extends beyond the school building. The sidewalks and bike route are thoughtfully designed to minimize exposure to potential hazards, ensuring that students can commute to and from school in a protective manner. This initiative promotes physical activity and a healthy lifestyle and encourages sustainable transportation. By establishing a safe and designated pathway, we aim

Pillar 2 Narrative:

At Rowan Elementary School, we prioritize the health and well-being of our students and staff through a comprehensive approach that encompasses medical and safety preparedness, social-emotional learning, and community engagement.

Our school has a full-time, on-site nurse dedicated to providing clinical services to students and staff with acute and chronic health conditions. We invest in annual training sessions for our staff, covering crucial topics such as administering epinephrine pens, bloodborne pathogens, diabetes care, food allergies, and seizure disorders. Moreover, selected staff members receive training in CPR. In collaboration with local paramedics, our staff is well-versed in the Stop the Bleed program, enhancing our preparedness for emergencies. In the fall, the school nurse offers vaccinations to staff to support preventative health measures.

Our cafeteria has designated allergy free tables. There are multiple choices for breakfast and lunch, which provide daily healthy options. Gluten free meals are available for students, which follow a specific protocol to prevent cross-contamination, including prep and service. Our cafeteria also houses a “share table,” which gives students access to extra lunch and snack options.

Rowan Elementary has School Resource Officers (SROs) who are always in uniform, armed, and highly trained. These certified officers from Cranberry Township work closely with the administration to assist with our security needs and have developed an excellent rapport with staff and students. They also work with students to encourage positive and productive behavior. During outdoor recess, it is common for these community role models to play a friendly game of football with our little ones or even jump rope!

Participation in Act 26 Mandatory Child Abuse Recognition and Reporting and ALICE (Alert, Lockdown, Inform, Counter, and Evacuate) Training ensures that our staff is well-informed and trained to respond effectively to a spectrum of scenarios, including active shooter situations. Threat-risk assessments are also conducted to enhance our safety protocols.

Emergency and inclement weather drills are also practiced with students, and they are instructed by their teacher on the appropriate course of action as called for given the situation. The RAPTOR technology system, which is considered the gold standard for reunification protocol, is also implemented during all drills to ensure that students and staff are accounted for and safe.

Additional security features to enhance safety are the employment of a security service that conducts interior and exterior foot patrols daily on our campus, a security guard at the entrance door, door alarms that sound when left or propped open, captured entrances with “buzz-in” entry systems, building entrance cameras and monitors, internal and external surveillance cameras, staff identification badges, visitor badges with RAPTOR, and mass notification system.

Rowan Elementary places a strong emphasis on Social-Emotional Learning to foster a positive and supportive environment. Our K-4 students and teachers participate in daily morning meetings to allow members to actively contribute and feel valued in their classroom communities. These sessions include posting funny memes to introduce the day with humor, discussing questions to facilitate connection opportunities in the classroom, posing debate topics, providing check-ins to encourage children to identify how they are feeling, and offering mindful exercises to help students increase their ability to regulate emotions.

In addition, our general education teachers provide weekly LEAD (Learn, Explore, Act, Develop) lessons in their classrooms. Every lesson was crafted by Rowan Elementary School teachers and reflects the tenets espoused in Sean and Stephen Covey’s books “The Seven Habits of Happy Kids” and “The Leader in Me,” respectively. We recognize that as times change, we deal with varying issues that are beyond the scope of academics. Today, our complicated world is grappling with the after-effects of a pandemic, crime, racism, war, and many other cultural hardships that are based on a lack of human relationships. At Rowan, we feel that, for our

children to have the optimal academic environment, we need to design a more rigorous, relevant curriculum that is also based on relationship skills. To accomplish this goal, we work on building healthy, meaningful relationships in our classroom that will enable the children to feel safe, uninhibited to learn, and free to find their voice while they develop into strong leaders with sound social skills. This has translated into fewer incidents of bullying both inside and outside of the classroom. We take seriously our duty and privilege to work with our children and families to cultivate a skill set in our children that promotes good decision-making and conflict-management abilities, the development of solid character traits, and the ingenuity of each child finding and expanding upon his/her unique gifts while accepting and celebrating the diversity of our Rowan community.

Through our schoolwide Positive Behaviors Interventions and Supports (PBIS) initiative, you will see our students, across all school environments, acknowledged for being “safe, kind, and responsible (SKR),” earning paper circle, heart, and star tangible reinforcers. Our teachers use these shapes in numerous ways in their classrooms for individual or classroom incentives to promote positive behaviors. In addition, 6 random staff members pass out SKR Leader Tickets daily to students. These students are chosen for following school expectations and are added to our SKR Leader/ 200 Board to be acknowledged and earn a chance for monthly rewards. The Rowan staff is always on the lookout for acts of kindness and integrity. By implementing PBIS strategies, we have created a positive and supportive environment that not only improves behavior but also enhances the overall health and well-being of our Rowan population.

Rowan Elementary students are provided monthly social/emotional lessons by our full-time school counselor emphasizing emotional regulation, problem-solving, and friendship building. The counselor facilitates direct, multi-faceted support services for students and teachers, connecting families with resources outside of school to foster the positive social, emotional, and academic growth of every student. In addition, tiered interventions are offered to our students during a special time carved into our instructional day entitled WIN (What I Need) which provides these lessons weekly. Tier 1 provides social/emotional lessons to ALL students in grades K-4 through monthly classroom lessons, using the evidence-based curriculum called Second Step. Tier 2 provides small group learning experiences for students in grades K-4 who need additional support in executive functioning, emotional management, organization, worry, self-esteem, friendship, and social skills. Tier 3 offers individual weekly check-ins/direct behavioral or emotional targeted instruction with students. Check-ins or breaks are also provided for students with individualized behavior plans (IEPs).

Mindfulness is woven into our school culture, with weekly pieces integrated into our morning announcements. Our counselor also hosts weekly lunch bunch sessions and addresses our students’ social-emotional needs through various activities, games, and role-playing. On World Kindness Day, we created a Mindfulness Room and activities for classrooms to participate in as well. For Child Grief Awareness Day, all students wore blue and worked on a collaborative butterfly display acknowledging loved ones who have been lost.

Additionally, Rowan Elementary embraces a comprehensive approach to promoting the health and wellness of our students by offering a sensory room to provide a calm respite for students to manage strong emotions or sensory needs. This space contains features and equipment that engage our students’ senses and motor movements, such as soft lighting, HEX lights, tranquil music, a small trampoline, ball chairs, compression sacks, liquid floor tiles, wobble balance boards, building blocks, vibrating pillows, sensory sox, sensory discs, kinetic sand, buckle pillows, and various art supplies.

Our Rowan administrators also provide support for their educators, contributing to a healthier overall school community. Each month, staff receive a choice board with tips and suggestions to uplift each other, notices of small gifts and treats, and messages of inspiration, encouragement, and affirmation.

Partnerships with organizations like Grace Church, Rowan Parent Teacher Association (PTA), Cranberry Township Fire Department, Glade Run, and Care Solace facilitate comprehensive mental health support or safety education, ensuring timely access to
personalized resources.

Through our Grace Church Project initiative, volunteers assemble weekend food packs for Rowan families grappling with food insecurity. They also assist students exploring the performing arts through the Band and Strings Program who do not have the financial means to rent instruments, enabling them to participate in our school's music program. There are also families affiliated with the Grace Project that provide Christmas gifts for Rowan students through the Christmas Outreach Program. This year, the Grace Project has also begun directly paying for student counseling services for struggling families.

We also collaborate with our Rowan PTA, a dynamic, vibrant organization that partners with our students and staff to accomplish many initiatives. For example, on September 19, 2023, the PTA hosted a Fun Run that raised $20,000 to purchase a multitude of new playground equipment, blacktop resurfacing, and a book vending machine, among other items, contributing to the revitalization of our outdoor learning spaces. Children collected pledges from family, friends, and community sources and then walked laps around our campus to fulfill their commitment to earning the funds that were promised. Our PTA also holds biannual book fairs, a holiday shop, BINGO night, and a spring carnival for the enrichment and enjoyment of our Rowan community. Our PTA sponsors an annual Reflections contest, which offers students the opportunity to highlight their talents and skills in dance, literature, music composition, film production, photography, and visual arts. Every spring, students are invited to participate in the annual PTA STEM Fair where they are challenged to investigate how science affects their everyday lives and encouraged to design and create a science project, using the scientific method.

To further impact our community, the Rowan staff contributes to a monthly charity and, during the December holiday season, staff and students work together to donate items to our "PTA Giving Trees." Each grade level is assigned specific goods that are donated and distributed to agencies in our area, such as VOICe and the Gleaners Food Bank to contribute to a brighter holiday season for those recipients in need.

Rowan also teams up with other community professionals as well. The Cranberry Township Fire Department visits our school to educate students in grades K-2 about fire safety. A local orthodontist fortifies our children's knowledge of dental health hygiene every year. Further, various Seneca Valley teachers and staff, as well as representatives from the Cranberry YMCA instruct our Rowan children on water safety in our state-of-the-art aquatics center on the main campus. Our school also features a dedicated physical education teacher, who partners with staff and parent volunteers for our annual Field Day event, a highlight for all K-4 students. This event features various engaging activities carefully designed to promote physical fitness, teamwork, sportsmanship, and cooperation. It serves as a dynamic platform where students can actively participate in fun and challenging physical activities, enhancing not only their physical well-being, but also emphasizing the importance of collaboration and team spirit. In addition to this event, our physical education teacher organizes our students' participation in the Kids of Steel Marathon every spring. This program is designed to combat obesity and promote physical activity in our youth. Additionally, in tandem with the American Heart Association

and the Kids Heart Challenge, he supports healthy habits in our children by organizing strength and conditioning activities during P.E. class.

Our commitment to promoting a healthy physical and positive lifestyle for students extends to programs such as “Girls on the Run” and an intramural sports program too. These enterprises enable our young participants to become involved in cardiovascular exercise, learn about balanced nutrition, and gain confidence as they develop a healthy self-image.

By forging a partnership with Glade Run for school-based therapy, we have created a supportive, integrated, and comprehensive approach to mental health, fostering the well-being of our Rowan community. By integrating Care Solace into the school’s support system, educators can enhance the mental health and wellness of students and staff, ensuring that individuals have access to timely, appropriate, and personalized mental health care resources. One of these places is The Highmark Caring Place which supports children and families who have experienced the loss of a loved one. Lastly, we partner with the Hope Learning Center to assist students with physical and occupational therapy needs.

In conclusion, our multifaceted approach to health and well-being reflects our commitment to creating a safe, supportive, and enriching environment for every member of the Rowan Elementary community.

Pillar 3 Narrative:

We have implemented a comprehensive environmental and sustainable education program, pioneering many initiatives. Our students actively engage in hands-on learning, gaining a deep understanding of ecological systems, plant life cycles, and the significance of sustainable practices. Hydroponics and gardening boxes serve as practical laboratories, providing insights into alternative cultivation methods and instilling an appreciation for resource-efficient agriculture. The inclusion of composting in our curriculum imparts the value of recycling organic waste, while project- and problem-based learning (PBL) activities encourage critical thinking in the context of environmental challenges.

In 2019, our school community came together to construct an outdoor amphitheater, providing a unique and inspiring venue for environmental lessons, presentations, and discussions. This space has been instrumental in hosting representatives from Moraine State Park, who annually educate our students about the distinct biodiversity of Pennsylvania’s plants and animals. Additionally, the amphitheater serves as a versatile space for guidance lessons, mindfulness activities, sensory experiences, and authentic science projects.

The natural wetland on our Rowan campus serves as a living classroom, offering students an immersive experience in studying biodiversity. Through observational nature walks, thematic studies such as “Project Songbird,” and firsthand encounters with native flora and fauna, students gain an organic understanding of the interconnectedness of individual species within the wetland ecosystem. The addition of a bat box in 2023, funded through our students’ “Project Night Moves” initiative, further exemplifies our commitment to conservation. Students raised $582 by providing educational tours of their creative exhibit during last spring’s open houses, highlighting their dedication to supporting the preservation of bat populations, vital for pest control and a healthy ecosystem. We also were awarded a grant of $250 from the Seneca Valley Foundation because of the impact of the “Night Moves” exhibit. This project not only aligned with our commitment to environmental stewardship but also instilled a sense of responsibility toward local wildlife among our proud Rowan students.

Educators at Rowan have championed a composting initiative that transcends mere waste management. This endeavor serves as a powerful educational tool, cultivating environmental awareness, fostering hands-on learning experiences, and advocating sustainable practices throughout our school community. The food scraps collected weekly are deposited in the compost bins by students and provide rich soil for our garden boxes. Students in grades 2-4 have assumed the role of student ambassadors, imparting the significance of composting to their peers through informative videos featured in our morning announcements. These environmentalists reach out to local businesses to secure the necessary supplies.

Four years ago, a collaborative effort involving Rowan's teachers, administrators, PTA, community members, and school board representatives gave rise to the formation of Rowan's Green Team. With a collective vision, this dedicated team aims to cultivate a green and healthy learning environment, coordinate activities fostering environmental stewardship, establish sustainable protocols, and craft lessons empowering students to connect with global issues and natural resources. The Green Team has been proactive, organizing professional development opportunities in collaboration with the Green Building Alliance, securing grants for garden box supplies, and enhancing the aesthetics of the school through biophilic efforts. Notably, a community-wide initiative involved the create a Green Team Jr. in January 2024, specifically with our third graders. This junior team will connect like-minded students, engage in sustainability-focused activities, and contribute to eco-friendly projects within the school community. Among the exciting new projects, the students are keen to use hydroponic equipment, acquired through a grant, to grow spinach, herbs, and lettuce for consumption during lunchtime meals in the cafeteria. The Green Team Jr. will also embark on initiatives such as planting trees, creating recycled crafts, organizing Earth Day celebrations and nature walks, establishing mini gardens, and designing bird feeders. By tailoring educational approaches to the age group of Green Team Jr., we aim to instill a profound sense of environmental stewardship, sustainability, and eco-consciousness in our young learners, laying an early foundation for a lifelong commitment to caring for our planet.

In the 2023-24 school year, a captivating opportunity unfolded for Rowan's third and fourth-grade students as they were welcomed to join the Robotics Club, exploring concepts pertaining to robot design, construction, and programming using WeDo 2.0 Robot Kits. This engaging experience goes beyond mere technical skills, as the children explore how robots play a vital role in performing tasks, particularly those deemed hazardous for humans, and how robots offer ingenious solutions to real-world problems. In March 2024, students will be offered another avenue for exploration through the STEM Club. Here, they delve into the engineering design process, emphasizing its iterative nature. Through hands-on activities, such as crafting balloon-powered cars with specified materials, students not only gain insights into the scientific principles of car movement but also actively test and refine their designs. By seamlessly integrating environmental and sustainable education into the fabric of the Robotics and STEM Clubs, students not only develop a comprehensive understanding of the synergy between technology, science, and environmental stewardship but also emerge as empowered innovators and advocates for a more sustainable future.

At Rowan, students eagerly anticipate their weekly journey to CIRC, a dynamic class dedicated to fostering creativity and environmental awareness. In CIRC, sustainability takes center stage through engaging projects and challenges. Students, across various grade levels, harness their creativity by repurposing common household items like paper towel rolls, cardboard, bottle caps, and buttons for a multitude of projects. Research projects are a hallmark of the CIRC curriculum, with students investigating topics such as ocean ecosystems, marine life, and the critical environmental issue of White-Nosed Syndrome in bats. Taking their knowledge beyond theory, students employ makerspace materials to meticulously construct scale-accurate models of bats found in Pennsylvania. Leveraging green screen technology, they create impactful PSAs for morning

announcements, shedding light on the plight of bats and their role in the ecosystem. The exploration extends to Google Earth, where students navigate the world's oceans and observe coral bleaching in locations like the Florida Keys and the Great Barrier Reef.
The CIRC experience extends to the innovative SMALLab, a captivating space where students use wands to engage both mind and body on a large mat equipped with cameras and a projector. Students immerse themselves in modular robotics, designing and coding animals with adaptations suited for survival in specific habitats. Exploring the crucial role of pollinators, students utilize LEGO WeDo kits to construct birds, bats, or bees. In collaborative teams, they go a step further, designing entirely new types of pollinators. The life cycle of a frog becomes a tangible lesson as students build realistic models depicting each stage of development. The engineering design process takes center stage as students armed with robotic resources embark on a mission to design and test ocean cleaning equipment, displaying their commitment to tackling real-world environmental challenges. In every CIRC session, Rowan students emerge as dynamic problem solvers, environmental advocates, and innovative thinkers ready to make a positive impact on the world.

In kindergarten, young learners dive into plant and animal life cycles. Utilizing our garden boxes, these curious minds nurture the growth of pumpkins, including planting, harvesting, and making astute observations. Buoyancy experiments add an extra layer of scientific exploration. An eco-conscious mindset is instilled as the children count and save seeds for the next planting season. Venturing beyond the garden, Kindergarteners embark on a fascinating exploration of the importance of spiders and bats. A visit to the bat box becomes a memorable experience, complemented by the study of other native nocturnal animals. Throughout the seasons, these young scientists explore coniferous and deciduous trees with a keen focus on engaging all five senses. Tree identification strategies foster an awareness of the diverse trees that grace our campus. The significance of trees as vital food sources and shelter for animals unfolds in their learning process.

In first-grade, students embark on an enriching project-based learning experience utilizing the Design Thinking Process. Commencing with the exploration of various picture books including works such as "Maddi's Fridge," "Saturday at the Food Pantry," and "A Bike Like
Sergio's" students engage in heartfelt discussions, fostering empathy for others and analyzing the theme of poverty. Through these meaningful conversations, students learn to identify the problems in each story. This leads to a brainstorming session where students propose ideas to address real-world issues, such as collecting food for a pantry, gathering clothes for shelters, and raising charitable funds to help others. Particularly impactful is the story "Those Shoes," which inspires students to act and collect money to help others purchase shoes. Collaborating with Soles4Souls, an organization in Nashville, students decide to create compelling commercials during Open House to encourage donations. In tandem with these efforts, students collaborate with our technology facilitator to delve into resources on food scarcity and poverty, incorporating research into their commercials. Additionally, in collaboration with our art teacher, students tie-dye shoelaces to sell during Open House. During the spring of 2023, one first-grade classroom studied diverse types of pollution. Focusing on air pollution, students conducted a unique experiment by placing Vaseline-coated index cards in various areas of the school, including the playground, courtyard, and bus doors. Upon observation, students noticed that the card near the bus doors appeared significantly darker and dirtier, leading them to the realization that vehicles idling during arrival and dismissal were contributing to increased pollution at our school. Students brainstormed solutions and ultimately decided to create "No Idling" posters. This comprehensive project not only engaged students in critical thinking but also empowered them to proactively address environmental concerns within their school community.

In second-grade, students dive into the states of matter, air, weather concepts, animal classification, and adaptations. These scientists embark on an embryology study, nurturing chickens' embryos in carefully

monitored incubators. They document the growth of the developing birds, culminating in the joyous hatching of young chickens. Our second graders become embryology experts, presenting their learning experience to their fellow Rowan K-4 friends. In addition, a unique tradition unfolds each spring as our hallways are transformed into natural interactive habitats during Open House. Second-grade students play architects, creating artifacts that adorn the hallway, forming a vivid representation of a chosen natural landscape. With passion and knowledge, they guide tours, educating the public on the rich tapestry of flora, fauna, and ecosystems. Emphasis is placed on the crucial need to sustain the natural resources of these habitats, echoing a collective call for environmental stewardship. To fund impactful environmental initiatives on our Rowan campus, donations are solicited, contributing to a legacy of sustainable practices and a deeper connection to the natural world.

In third-grade, students engage in plant germination. Using Wisconsin Fast Plants, students witness the life cycle unfolding before their eyes. While tracking the growth of these plants, students foster a deep understanding of the diverse properties and roles of seeds. From the essential job of seeds to the fascinating intricacies of pollination, students explore the symbiotic relationship between plants, bees, and other insects. In addition, third-graders champion environmental conservancy of recycling. They unravel the magic of how assorted items are recycled and repurposed. Furthermore, they organized a schoolwide initiative, rallying their peers to collect bottle caps. These insignificant caps transformed into a symbol of sustainable creativity as they were repurposed into a bench that is due to arrive on our campus later this school year, a tangible testament to the power of environmental stewardship and collective action.

In fourth-grade, students investigate the profound impact of erosion, demonstrating how human activity influences the environment. They explore the physical properties of soil components, conduct experiments, and make real-world connections. They draw thoughtful conclusions on how to sustain life on earth. The water cycle becomes a visual masterpiece as fourth graders not only model and label its phases but also articulate a comprehensive understanding of the essential natural process. Within the vast tapestry of ecosystems, students distinguish between living and nonliving components, summarizing their roles in these systems. They also study food chains and food webs.

A standout facet of our school's commitment lies in the deliberate design of project and problem-based learning units, with a particular emphasis on conservation and sustainability. Noteworthy among our past endeavors are "Project Bat" and "Project Night Moves," fostering professional collaboration with esteemed partners like Scott Detwiler, from the Audubon Society of Pennsylvania and Beechwood Farms Nature Reserve, and Barn Hill Preserve of Delaware. Our focal point for the current year is "Project Under the Sea." Harnessing the innate passion of our students for the oceans and its diverse wildlife, second-grade teachers have curated an array of engaging activities including creating an immersive exhibit utilizing upcycled materials, to enlighten the community about the significance of ocean animal species and their ecosystems, as well as the destructive influence that pollution has on the environment. Activities from across the curriculum will result in a rich, multi-dimensional experience. Our students will serve as docents during the March 2024 Open House. Visitors will be invited to donate to the tour. The student-driven nature of this initiative ensures that they wield the deciding voice on fund allocation. In tandem with our PBL focus, a field trip is scheduled for a visit to the Pittsburgh Zoo and Professional development stands as a cornerstone in fostering our staff's deep understanding of sustainability and conservation. A source of immense pride and gratitude is our enduring partnership with the Green Building Alliance, a relationship that has flourished over the past five years. Our staff members have actively engaged with the GBA-sponsored retreats as integral participants in the Green and Healthy School Academy. These experiences have been enriched by immersive workshops that delve into the intricacies of hand printing and the principles of biophilic design. Furthermore, our team has been honored to contribute to

regional conferences hosted by GBA, seizing the opportunity to showcase and celebrate our Project-Based Learning (PBL) initiatives.