

## 2021 School Sustainability Award Nominee Presentation Form

### ELIGIBILITY CERTIFICATIONS

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#### School and District's Certifications

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

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

### U.S. Department of Education Green Ribbon Schools

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Public  Charter  Title I  Magnet  Private  Independent  Rural

Name of Principal: Ms. Sabrina Hill-Black

Official School Name: D.C. Virgo Preparatory Academy

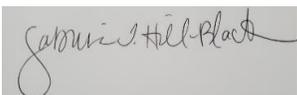
School Mailing Address: 813 Nixon Street, Wilmington, North Carolina 28401

County: New Hanover State School Code Number: 65Z000

Telephone: 910-251-6150 Fax: 910-251-6055

Web site/URL: <https://uncw.edu/virgo> Email: blacksh@uncw.edu

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



Date: 1/19/2021

(Principal's Signature)

### **Nominating Authority's Certifications**

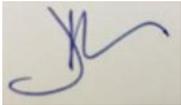
The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

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

Name of Nominating Agency: North Carolina Department of Public Instruction

Name of Nominating Authority: Mr. Jon Long, Architect, School Planning

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



Date: 2/16/21

(Nominating Authority's Signature)

### **SUBMISSION**

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

OMB Control Number: 1860-0509

Expiration Date: March 31, 2021

### **Public Burden Statement**

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email [ICDocketMgr@ed.gov](mailto: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.



2021 Green Ribbon School Application

**Nominee Information**

School Name: D.C. Virgo Preparatory Academy  
Category of Nomination: School (Grades K-8)

**D.C. Virgo Preparatory Academy**

813 Nixon Street  
Wilmington, NC 28401  
(910) 251-6150 (P)  
Twitter: @dcvpa  
Facebook: "DC Virgo Preparatory Academy"

Top Official :

Ms. Sabrina Hill-Black  
Principal of DC Virgo Preparatory Academy [blacksh@uncw.edu](mailto:blacksh@uncw.edu) Office: 910-251-6159

Lead Applicants:

Dr. William (Bill) L. Sterrett  
Associate Dean of Teacher Education and Outreach at UNCW [sterrettw@uncw.edu](mailto:sterrettw@uncw.edu) Office: 910-962-4174

**Check all that apply**

Elementary x  
Middle x

**Provide percentages, if any are relevant to your school, district, or institution:**

Pell Recipients: n/a	Special Education: 21%
Free and Reduced Price Lunch: 99%	Graduation Rate: n/a
Minority: 94%	Attendance Rate: 95.32%
Limited English Proficient: less than 3%	

**Provide the following:**

Total Enrolled: 209      Number of Schools: 1      Buildings: 4      Campuses: 1



## 2021 Green Ribbon School Application

### **Introduction**

D.C. Virgo Preparatory Academy (DCVPA) is a highly diverse public K-8 lab school that is operated by the University of North Carolina Wilmington (UNCW) in partnership with the New Hanover County School district. Located in downtown Wilmington, the school transitioned from a middle school to a K-8 school in July 2018 as a result of North Carolina General Assembly legislation requiring the University of North Carolina System Colleges of Education to establish laboratory schools in partnerships with local public school districts. DCVPA has one class per grade level in K-5 and two classes per grade level in 6-8, totaling 209 students. The goal for instruction at DCVPA is to be guided by the acronym PIER (Personalized, Inquiry-based, Experiential, and Reflective), and the school emphasizes interdisciplinary STEM education, sustainability, and environmental literacy. The focus on a collaborative place of learning “[where families come to school together](#)” permeates the learning community, and has empowered a focus on sustainability for K-8 students.

(Picture 1: D.C. Virgo Preparatory, a K-8 public lab school in downtown Wilmington, NC)

### **Summary of the Three Pillars**

#### **Pillar I: Efforts to Reduce Environmental Impact and Costs**

DC Virgo has worked consistently to reduce environmental impact through a student-led recycling program, seeking to maximize water conservation, and utilizing alternative transportation. The school has actively fostered use of outdoors learning spaces as well. The school fosters the three ED-GRS pillars through a Support Team effort led by the principal, dean, assistant principal, teacher leaders, and supporting university faculty and staff.

An outdoor classroom provides an opportunity to engage all students in outdoors learning. The K-8 teachers and staff are able to utilize the resource to provide a unique learning environment. As a result of utilizing the space with intentionality and mitigating the COVID-impacted on-campus adjustments, the school has seen significant utility consumption decrease over time. Instead of irrigation, there are two rain barrels strategically located on DCVPA’s campus. They are both placed to receive runoff and further the use of the water in the school’s gardening initiatives. One barrel is placed in proximity to the garden and is used to help cultivate the produce there while the other is used to water the vegetation that enhances and beautifies the



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school grounds. A total of 237,990 gallons of municipal water were conserved between the '18-'19 and the '19-'20 fiscal years.

The principal attributes the school's recent successes in saving energy through staff-led efforts both before and during the pandemic to minimize the amount of classroom use and hallway traffic to save energy usage, transitioning to energy-efficient bulbs, strategically using open-door classrooms, and utilizing natural light through blinds as key staff-led efforts. The total energy consumption was reduced from 958,544 kWh (July 2018 - June 2019) down to 854,304 kWh (July 2019 – June 2020). Additionally, most students utilize some form of alternative transportation for their daily commute. This action alone diverts 899 metric tons of greenhouse gases from the atmosphere each year and saves 101,043 gallons of gas.

A student-led 5th grade recycling initiative at DCVPA involves collaboration with 4<sup>th</sup> grade and UNCW, whereas the DCVPA fourth and fifth grade students are collaborating with UNCW Sustainability to implement a school-wide recycling program. In response to an increase in disposable water bottle use because of COVID-19 restrictions on water fountains, fourth and fifth grade students created and implemented this recycling project. Every week, students empty the recycling bins placed around school and prepare the recycling for pick-up.

### **Pillar 2: Efforts to Improve the Health and Wellness of Students and Staff**

The DC Virgo learning community is simultaneously focused on addressing the physical health and social-emotional needs of their students and uses a “kinship model” to facilitate relationship building between staff, families, and students. Staff have been trained in the Community Resilience Model and how to implement restorative circles. Classrooms participate in daily morning meetings using curriculum prepared by the Social and Emotional Learning (SEL) Pillar. Students are evaluated to identify and support student social and emotional needs. Daily morning meetings (held schoolwide) are focused on social-emotional learning and highlight student and staff achievements, set goals, and encourage the learning community to succeed in all areas.

K-8 students receive physical education and/or recess daily; and the school maintained physical activity throughout the pandemic via virtual engagement. The school opened an [Action Based Learning](#) room several years ago; this involved refitting a room with action-based learning equipment, involving staff in training, and encouraging regular use of movement breaks in school. Gains noted from ABL work include improved on-task behavior; improved academic retention skills; and growth in visual processing skills such as handwriting.



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Murals were painted on outside surfaces to encourage ABL as students travel through campus and as an outdoor activity. Teachers integrate movement breaks throughout academic instruction to allow students to re-center their brains and bodies for learning. The Support Team sought feedback from the school community in planning additional [outdoor learning activity](#) spaces; students were able to vote on preferred playground design, resulting in a playground that provided elementary students a place to play near the learning gardens.

DC Virgo has incorporated restorative practices throughout the school which has helped reduce discipline infractions and time out of class. All classes participate in daily morning meetings that incorporate mindfulness and restorative practices. The school utilizes a restorative room where students can “take ten” to calm down, process elevated emotions, and return to the classroom ready to learn. These restorative practices were detailed in a [published piece for EdNC](#) authored by DCVPA teachers and staff in 2020.

The school has an onsite health office that provides medical services for students and parents such as primary care; well child checks; physicals, blood pressure checks; flu shots; diabetes care, and immunizations. These services are offered on site at the school daily as a part of the “kinship model” focus.

### **Pillar 3: Efforts to Ensure Effective Environmental and Sustainability Education**

DC Virgo collaborates with community members to ensure integrated sustainability education throughout the program. From fostering interdisciplinary learning opportunities in environmental education to sustainability literacy, from promoting co-curricular field trips and hands-on project based learning opportunities to maintaining a robust learning garden, Pillar 3 promoted throughout the school in a collaborative and sustained manner.

For example, the assistant principal teaches middle grade students gardening basics, such as learning how to grow plants from seeds using a greenhouse and grow lights. Additionally, students are provided with weekly presentations on various topics on sustainability such as plants and air quality, the importance of water, how to recycle at home, etc. Students learn to transfer their plants to the raised beds and observe the developments in the garden. The school is working with a local volunteer (and UNCW doctoral student) to introduce mycology lab lessons and to revamp the outdoors learning garden; this effort has engaged additional community volunteers alike to promote interdisciplinary learning.



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Civic engagement is a key part of the school's collaborative work as well. All students engage in field trips in the local area that are focused on outdoors education or interdisciplinary learning experiences. DC Virgo is a partner in a National Science Foundation (NSF) Research Experiences for Undergraduates (REU) grant to support DC Virgo K-8 students learning about marine sciences through authentic interdisciplinary learning experiences; this effort is designed to spark interest about career pathways related to the environmental sciences.

## **Descriptive Narratives of the Three Pillars**

### **Narrative for Pillar I: Efforts to Reduce Environmental Impact and Costs**

DC Virgo has worked consistently to reduce environmental impact through a student-led recycling program, seeking to maximize water conservation, and utilizing alternative transportation. The school has fostered use of outdoors learning spaces as well. School leaders worked with staff to save energy before—and in the midst of—the pandemic, leading to significant energy consumption decreases. In seeking to reduce environmental impact, the school has focused on the following initiatives:

- Principal Hill-Black and the DC Virgo staff worked to strategically minimize classroom usage in the midst of the pandemic by strategically reducing classroom use (through purposeful scheduling and minimizing hallway traffic in a hybrid environment), heating/cooling, light, and overall electricity usage as noted below.
- The outdoor classroom provides an opportunity that to provide a unique learning environment. The outdoor classroom is designed with forward-facing seating and a teaching “station.” During the period of phased re-opening due to COVID-19, students were able to continue learning in the space while also benefiting from fresh air. As a result of utilizing our space with intentionality, and mitigating the COVID-impacted on-campus adjustments, the school has seen dramatic utility consumption decreases over time.
- DC Virgo has created a baseline greenhouse gas emission inventory for the 2018-2019 academic year. The emission inventory includes purchased energy, natural gas, transportation, refrigerants, and waste. Additionally, a water baseline was established for



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the same year. The inventories are updated yearly to assess trends and identify needs for improvements.

- Additional efforts before the pandemic, such as strategic use of blinds and transitioning to updated light bulbs have been a focus point for the staff. The total energy consumption was reduced from 958,544 kWh (July 2018 - June 2019) down to 854,304 kWh (July 2019 – June 2020). The total greenhouse gases diverted from this action alone is 51.1 metric tons of carbon dioxide. Further, this energy conservation occurred during a year that had similar average temperatures as the previous year.

(Picture 2: Outdoor classroom)

- A total of 237,990 gallons of municipal water were conserved between the '18-'19 and the '19-'20 fiscal years. The landscape at DCVPA uses no irrigation, saving a large number of gallons of water each year. Instead, there are two rain barrels strategically located on DCVPA's campus. They are both placed to receive runoff and further the use of the water in the school's gardening initiatives. One barrel is placed in proximity to the garden and is used to help cultivate the produce there while the other is used to water the vegetation that enhances and beautifies our school grounds. Efforts are underway to install additional rain barrels near the raised beds which will minimize rainwater going to the stormwater runoff.
- The plants and trees on the property are either native or low-maintenance for the area, requiring no additionally water to thrive. DCVPA is located in Burnt Mill Creek watershed. This watershed is impaired from the effects of urban stormwater runoff. The City of Wilmington, several universities, and other organizations with water quality interests have worked to repair the watershed for nearly a decade.
- Most students (91%) at DCVPA utilize some form of alternative transportation for their daily commute. Those who ride the bus account for 80% of students and the others either walk, bike, or take vanpool. This action alone diverts 899 metric tons of greenhouse gases from the atmosphere each year and saves 101,043 gallons of gas. This is the equivalent of planting 1,173 acres of forest. The neighborhoods surrounding DCVPA are equipped with sidewalks and the speed limited is generally 25 miles per hour. This creates an environment where walking and biking is a viable option.



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- Student-led Recycling Effort –In response to an increase in disposable water bottle use because of COVID-19 restrictions on water fountains, fourth and fifth grade students created and implemented a schoolwide student-led recycling project. Every week, students empty the recycling bins placed around school and prepare the recycling for pick-up.
- The assistant principal provides weekly composting instruction to 4<sup>th</sup> grade students; the program allows cafeteria food waste to be redirected to a collaborative composting facility. Once processed, the material is purposed for reuse in gardening and thus reduces the amount landfill load generated by the school. The DCVPS vegetable gardens have already benefitted by utilizing compost. This program teaches students the full cycle of food composting and growing.

### **Narrative for Pillar 2: Efforts to Improve the Health and Wellness of Students and Staff**

DC Virgo is simultaneously focused on addressing the physical health and social-emotional needs of their students and uses a “kinship model” to facilitate relationship building between staff, families, and students. DC Virgo demonstrates numerous components of a whole school, whole community, whole child model as outlined by the CDC (WSCC, n.d.). DCVPA remains in a local partnership with the New Hanover County School district. Together, the school, university, and district promote a healthy physical environment for students and staff.

- The school has focused on green efforts through an ongoing collaborative green-focused Support Team co-led by the principal and dean that includes school staff and teacher leaders, university faculty and staff, and meets weekly. The Support Team has introduced and integrated the three ED-GRS pillars in a purposeful, collaborative way, with a particular focus on health and wellness. From planning for outdoor play and learning spaces to navigating interdisciplinary field trip opportunities, and from mapping out STEM-focused curricular opportunities to engaging with partners to planning for facilities use and upgrades, the Support Team has supported systemic adoption of the ED-GRS pillars.
- The DC Virgo health office has leveraged resources to offer medical services for students and parents such as primary care; well child checks; sports & work physicals, blood



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pressure checks; flu shots; diabetes care, and immunizations. These services are offered on site at the school daily as a part of the “kinship model” focus.

- Cleaning and maintenance protocols are the shared responsibility of the institutions. The partnership allows the local school district to help maintain major systems (heating, air conditioning, ventilation, plumbing to a certain extent) within the school building. All cleaning agents and pesticides are approved for use in K -12 environments.
- As the impact of COVID-19 began to impact cleaning protocols and practices, attention to the details of cleaning agents became more evident. The use of any new products requires approval. All agents are required to have accompanying safety data sheets that include information such as: product and company identification, hazards identification, composition/information on ingredients, first aid measures, fire-fighting measures, accidental release measures, handling and storage, exposure controls/personal protection, physical and chemical properties, stability and reactivity, toxicological information, ecological information, disposal considerations, transport information, regulatory information, and other information.
- Air purifiers were added to classrooms to assist with filtration and to promote health and wellness for students and staff.
- All pesticide information is carefully monitored in consultation with a contracted company for the following services: pest management, rodent management, and bed bug management through a maintenance plan for the property.
- To bolster family engagement, DCVPA has collaborated with the university’s Public Health Studies program to put on a health fair for students, staff, and families. This past year, because of COVID-19, the health fair took place virtually. The lessons and activities were led by the DCVPA Health and PE teacher, and families and staff were provided access to the resources as well.
- Another DCVPA partner, Coastal Horizon, provides wraparound services for our students, families, and community to address learning social emotional skills. Through their support, students and families apply social and emotional learning to acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage



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emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible choices.

- One of DCVPA's four school-wide pillars supported in the Support Team is Social and Emotional Learning. This team provides professional development as well as curriculum and assessment tools for teachers and staff. Staff members have been trained in the Community Resilience Model, how to implement restorative circles, and as *Life is Good* Playmakers.
- Classrooms participate in daily morning meetings using curriculum prepared by the SEL Pillar. All students are evaluated using the Devereux Student Strengths Assessment (DESSA) to pinpoint and support student social and emotional needs. Daily morning meetings (held schoolwide with all 200+ students) are focused on social-emotional learning and help highlight student and staff achievements, set goals, and encourage the learning community to succeed in all areas.
- The implementation of the Multi-Tiered System of Supports (MTSS) team and the Restoration Committee have helped to provide structure and support for the staff in meeting the academic and behavioral needs of our students and allowed students an opportunity to process through their discipline referrals with the team and discuss alternate behaviors. Students are pleased to have a voice in the discussion and in the decision regarding their learning project.
- The Restoration Committee makes efforts to heal relationships through creative and alternative consequences focused on teaching desired behaviors and provides an opportunity for the team to discuss all contributing factors regarding the behavior. The school also implemented Scholarchip's Alternative Behavior Educator (ABE) program to document discipline referrals and to have a data source. This system allowed for easier data collection and analysis.
- DCVPA incorporates these restorative practices throughout the school. All classrooms participate in daily morning meetings that incorporate mindfulness and restorative practices.



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- The school utilizes a restorative room where students can “take ten” to calm down, process elevated emotions, and return to the classroom ready to learn. These restorative practices were detailed in a [published piece for EdNC](#) in 2020 authored by DC Virgo teachers and staff.
- DC Virgo is focused on improving the health and wellness of students, staff, and community members by integrating an environmentally- aware health program and promoting physical education for all students. All K-8 students receive physical education and/or recess daily; and we maintained physical activity throughout the pandemic via virtual engagement.
- As a part of the health curriculum, DC Virgo students engaged in healthy meal planning, keeping a nutrition journal to monitor healthy habits. Social skills circles were incorporated into the K-8 physical education classes.
- One unique feature of DC Virgo is the school’s [Action Based Learning](#) Lab classroom. This is a refitted classroom accessible to all students and staff, with grant-funded action-based learning equipment. The school involved staff in training and promotes the use of movement breaks in school.
- As noted in the above referenced article, the ABL Lab is called “The Brain House” by students and features wall activities, learning mats and ABL stations including a Learning Ladder mat that supports balance, ABL Pathway Surfboards that support visual development, and a Cardio Snowboarder that supports cardiovascular development.
- Gains noted from the teacher-led ABL work include the following: improved on-task behavior following the break; improved academic retention skills; students with exceptional needs demonstrating growth in visual processing skills such as handwriting.

(Picture 3: Principal Hill-Black overviews the Action-Based Learning Room)

(Picture 4: Taking a movement break in the ABL room)

- In addition to the Action-Based Learning Lab, murals were painted on outside surfaces to encourage ABL as students travel through campus and as an outdoor activity. Teachers



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integrate movement breaks throughout academic instruction to allow students to re-center their brains and bodies for learning.

- In transitioning from a former middle school to a K-8 collaborative school, the school's green-focused Support Team worked together to plan additional [outdoor learning activity](#) spaces, and students were able to vote on preferred playground design, resulting in a playground that provided elementary students a place to play near the learning gardens.

(Picture 5: Student choice in designing outdoor play areas)

- The K-8 school and university partnership provides myriad bi-directional learning opportunities. Over two hundred university students have engaged in field placements at the school, and DCVPA Students far outpaced expectations due to reading interventions, and made significant gains.
- The school applied for and received a donor-supported computer distribution initiative led by DC Virgo staff that provided all DC Virgo families with computers; this positioned the school "ahead of the curve" as the COVID-19 pandemic caused schools across the state to close in March 2020.
- School staff then coordinated efforts with the university's Masters of Instructional Technology students to enhance learning opportunities for students through online professional development and troubleshooting support. The school principal worked to ensure that all students had access, even visiting homes during the pandemic to help troubleshoot and encourage students.

(Picture 6: Computer distribution prior to the pandemic to provide 100% student access)

### **Narrative for Pillar 3: Efforts to Ensure Effective Environmental and Sustainability Education**

DCVPA collaborates with community members and the university to ensure integrated sustainability education throughout the program. Community involvement is a key component of the lab school effort. From fostering interdisciplinary learning opportunities in environmental education to sustainability literacy, from promoting co-curricular field trips and hands-on project



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based learning opportunities to maintaining a robust learning garden, Pillar 3 promoted throughout the school in a collaborative way.

- DCVPA collaborates with UNCW CESTEM (Center for Education in STEM) to maintain a STEM Lab where students can participate in environmental and sustainability projects that may need dedicated space outside the classroom. Teachers are able to check out digital devices and resources from CESTEM that integrate environmental literacy and sustainability concepts throughout the curriculum.
- Teachers and administrative staff alike are “all in” participants when it comes to hands on teaching activities at DCVPA. Assistant Principal Laura Jennings works collaboratively with the Watson College of Education and UNCW Sustainability office to teach middle school students gardening basics. Students are learning how to grow plants from seeds using a greenhouse and grow lights. They are also learning how to read and understand *Blum’s Farmer’s and Planter’s Almanac* to become familiar with how astronomy, the weather, and planting seasons impact the growth of plants.
- Teachers and staff work with UNCW Sustainability Peer Educators provide students with weekly presentations on various topics on sustainability such as how plants affect air quality, the importance of water, how to recycle at home, etc. This hands-on project allows the students to be actively engaged in growing plants from seed to garden to table.
- Staff and university collaborators distributed ‘plant packages’ containing the necessary materials to watch the beginning stages of the plant growth progress at home during the pandemic. Students were able to safely transfer their plants to the raised beds so they could continue observing the developments in the garden upon their return to in-person classes.
- A community volunteer (and UNCW doctoral student) has worked with the grade levels to introduce mycology lab lessons and to revamp the outdoors learning garden; this work has involved middle grades students and community volunteers alike to promote interdisciplinary learning.
- Teachers are introducing students to grafting to boost production and minimize plants' being affected by pests and soil-borne diseases. This spring, students will focus on



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tomatoes grafting following guidelines from agricultural universities' extension services. This hands-on learning activity will also introduce students to scientific documents prepared by agricultural research universities.

(Picture 7: Middle grades students learn gardening and mycology concepts)

(Picture 8: A student shows a petri example from the mycology lab)

(Picture 9: Student engaged in seed-planting project led by the assistant principal)

- DCVPA eighth grade students learn from UNCW students about science and STEM careers. Students working with a university professor in an *Extending Science Beyond Research* class prepared ten different workshops that allowed eighth grade students to learn about different scientific fields, research, and career opportunities. Some of their work can be viewed [HERE](#).
- A K-12 Engineering Coordinator worked with DCVPA middle grades students over a 7-week period to teach hands-on engineering concepts such as circuits and coding. This [UNCW feature](#) describes how Ms. Jasmine Gaston was motivated “to increase minority representation in engineering and increase minority student engagement with STEM” and her collaborative efforts with DCVPA have enabled students to see themselves as future engineers and scientists.
- Working with a university professor and DCVPA teachers, middle grade students were able to take part in four 3-hour Saturday sessions relating to environmental and sustainability concepts. Each session focused on extended understanding of varying topics, such as meteorology, agriculture, maritime, and careers in STEM; this provided learners with an opportunity to question and learn from an expert in the field being introduced and an integration activity which could be used with the entire family. Continuation of activities are being integrated within the classroom curriculum and aligned with literacy standards.
- Additionally, DCVPA Middle Grades teachers have partnered with the university MarineQuest School Program to construct three specialized programs for middle grade



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students. These programs are focused on Ecology, Meteorology and Biotechnology through the contextual lens of Marine Science.

- Civic engagement is a key part of the school's collaborative work as well. To provide additional learning opportunities during the intersession period (the break within the year-round calendar), students were introduced to skills and concepts around entrepreneurship and how they could leverage potential to become entrepreneurs even at their age. By the end of the session, students worked collaboratively and individually and introduced businesses. Some students moved from the planning stages that were initiated during the intersession and actually started businesses within the DC Virgo local community.
- Students attend young entrepreneurs competitions, such as UNCW's YEP (Young Entrepreneurship and Nick Cannon's ATM (America's Teen Mogul), in which older students were able to present business ideas and inventions. See photos and description here: <https://www.starnewsonline.com/photogallery/nc/20190412/news/412009994/PH/1>
- DCVPA works with the UNCW Office of the Arts often to bring cultural events to the students and families. Elementary students visited Watson to celebrate Read Across America Day, and the entire school has connected with Engineering Expectations through Youth Programs and completed exciting hands-on STEM projects. Many UNCW faculty and staff members visited the school to read books with African American authors and illustrators during our Black History Month read-in. Fourth-grade students visit the UNCW Randall Library for a tour and to explore the Digital Makerspace.
- The university was recently awarded a collaborative National Science Foundation (NSF) Research Experiences for Undergraduates (REU) grant to support a three-year effort to provide experiences for first-year university students and DC Virgo K-8 students to better understand the marine sciences and to engage students through authentic interdisciplinary learning experiences to and to foster awareness and spark interest about career pathways related to the environmental sciences.

(Picture 10: DC Virgo students go to UNCW and surrounding areas for field trips to tie in curricular aspects including sustainability and outdoors education)



## 2021 Green Ribbon School Application

*Note: Dr. Sterrett and Principal Hill-Black would like to thank members of the “Green” Support Team that contributed to this document, including Dr. Laura Jennings, Ms. Kemeka Sidbury, Ms. Jodi Hebert, Ms. Amy Horgan, Mr. Sohail Sukhera, Ms. Kathryn Pohlman, Ms. Emma Cowen and others referenced in the document and related resources.*

### References and Related Resources:

- Bell, L. (2019). DC Virgo Preparatory Academy: A lab school in Wilmington wants families to come to school together. *Ed NC*, Available: <https://www.ednc.org/d-c-virgo-preparatory-academy-a-lab-school-in-wilmington-wants-families-to-come-to-school-together/>
- DC Virgo begins second year as a UNCW School (2019). *Watson Chronicle*. Available: <https://uncw.edu/newsletters/watson-chronicle/2019/09/d.c.-virgo-begins-second-year-as-a-uncw-school.html>
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