



## 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: Mr. Jackson Norvell

Official School Name: Wrightsville Beach Elementary School

Official School Name Mailing Address: 220 Coral Drive, Wrightsville Beach, North Carolina 28480

County: New Hanover State School Code Number: 408

Telephone: 910-265-3171 Fax: 910-256-4386

Web site/URL: <https://www.wrightsvillebeach.nhcs.net> E-mail: jackson.norvell@nhcs.net

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

Date: 2-11-2021

(Principal's Signature)

Name of Superintendent: Dr. Charles Foust  
District Name: New Hanover County Schools

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



Date: 2-11-2021

(Superintendent's Signature)

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

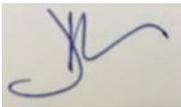
The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

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: 2-12-2021

(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: 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.



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**School Contact Information:**

School Name: Wrightsville Beach Elementary School  
District Name: New Hanover County Schools  
School Address: 220 Coral Drive  
City/State/Zip: Wrightsville Beach, NC 28480  
School Website: [www.wrightsvillebeach.nhcs.net](http://www.wrightsvillebeach.nhcs.net)  
Facebook Page: [www.facebook.com/WBeachSchool/](http://www.facebook.com/WBeachSchool/)

Principal Name: Jackson Norvell  
Principal Email: [jackson.norvell@nhcs.net](mailto:jackson.norvell@nhcs.net)  
School Phone Number: 910-256-3171

Lead Applicants: Mr. Jackson Norvell, Principal  
Ms. Jaime Conti, Instructional Coach  
[jaime.conti@nhcs.net](mailto:jaime.conti@nhcs.net)  
Ms. Cissie Brooks, Marine Science Coordinator  
[ann.brooks@nhcs.net](mailto:ann.brooks@nhcs.net)  
Mrs. Jennifer Williams, Teacher  
[jennifer.williams@nhcs.net](mailto:jennifer.williams@nhcs.net)

**School Information:**

School Type: Public  
Grades Served: Elementary K-5  
District Type: Suburban  
Current Enrollment: 271  
Attendance Rate: 98%

Does your school serve 40% or more students from disadvantaged households? No

Free & Reduced Lunch: 8.5%  
Minority: 8%  
Limited English Proficient: 1%  
Special Education: 6%

Is your school in one of the largest 50 districts in the nation? No



## 2021 Green Ribbon School Application

### **Introduction**

Nestled on a barrier island surrounded by a tidal estuary in the town of Wrightsville Beach sits Wrightsville Beach Elementary School, affectionately referred to many as WBS. Serving students in New Hanover County since 1954, WBS has deep historical roots and is a cherished landmark in the community. What once was a small, antiquated facility that staff, students and teachers had grown accustomed to, WBS is now newly renovated and able to house all of our students under one roof. This renovation, part of the 2014 New Hanover County School bond, not only provided additional space but has transformed WBS into a modern structure that brings in natural light, highlights the surrounding environment, and provides ample opportunity for our students to take advantage of a variety of outdoor spaces.

Wrightsville Beach Elementary is a US Department of Education Blue Ribbon School serving 271 students in grades Kindergarten through 5th grade. WBS utilizes its natural surroundings to enhance student learning by providing authentic experiences through a strong Marine Science Program. The only one of its kind in the region, our Marine Science program plays a significant role in the culture of the school as life lessons of citizenship, team building, problem solving, and responsibility are embedded into the program. Integrating guidance and other contents engages as well as motivates our students. Plus, it provides a plethora of volunteer and community partnership opportunities. Together, we are committed to providing high quality and challenging education with a key focus on the marine environment.

(Picture 1: WBS then and Now)

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

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

Nestled on a barrier island surrounded by a tidal estuary in the town of Wrightsville Beach sits Wrightsville Beach Elementary School, affectionately referred to many as WBS. Serving students in New Hanover County since 1954, WBS has deep historical roots and is a cherished landmark in the community. What once was a small, antiquated facility that staff, students and teachers had grown accustomed to, WBS is now newly renovated and able to house all of our students under one roof. This renovation, part of the 2014 New Hanover County School bond, not only provided additional space but has transformed WBS into a modern structure that brings in natural light, highlights the surrounding environment, and provides ample opportunity for our students to take advantage of a variety of outdoor spaces.

**Energy Efficiency and Water Conservation** - The renovation of WBS is the result of thoughtful planning to not only incorporate stunning views of our environment but to promote energy savings as well as reduce our impact on the environment. The 31,695 square foot building has been upgraded with occupancy vacancy sensors for lighting, sensors for exhaust fans as well as the installation of circular pump controls for the water heater to reduce energy consumption. The second floor was positioned strategically to maximize the sun's solar



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energy and large windows throughout are made with specialized glass to maximize daylight without heat gain. Intentional efforts were made with the new construction to reduce stormwater runoff and erosion into bordering local waterways by directing the stormwater from the building to two new French Drain systems. The installation of new plumbing and upgrading old plumbing was planned to reduce consumption and cost of domestic water by installing low flow fixtures and waterless urinals throughout the school.

The landscaping around WBS is designed to include native plants and vegetation that are already acclimated to our environment which allows us to utilize rainfall as opposed to installing irrigation systems. This year, through a grant from the New Hanover County Extension Master Gardener Volunteer Association, our parent-lead WBS "Green Team" is reinstalling raised garden beds, and for the first time installing a Rain Garden on our school grounds. This Rain Garden is designed to be an outdoor, hands-on learning area for students, teachers, staff, parents, and the community to learn about water runoff, sustainable garden design, native plants, and rain barrels. No pesticides or chemicals are used which protects the wildlife, landscaping, and waterways, drastically reducing our impact on the environment and the future of our surroundings.

(Picture 2 - Raised Garden Bed)

**Transportation** - The students of WBS utilize various modes of transportation for their daily commute to school. 34% of students ride the bus, 12 to 15% walk or ride their bikes to school, and a significant number of car riders choose to carpool. WBS has separate pick up areas for walkers/bikers and car riders to reduce wait time and idling. Buses and vans depart first to decrease idling time. WBS is currently in the planning stage of implementing an online technology to more efficiently line students up and load cars more efficiently. These practices are among those that demonstrate a collective effort to reduce our carbon footprint. It is also a demonstration of the WBS school community's commitment to healthy living.

**Recycling and Waste Reduction** - WBS has focused efforts on waste reduction initiatives and protecting our environment through our Marine Science Program. A student-led, school-wide initiative for Recycling continues each year and is led by our 4th grade students. Students learn how long various items take to decompose and each year produce education videos shared with students school-wide to reinforce the importance of recycling.

**Outdoor Learning Spaces** - The school property has multiple areas for classes to be held outside as well as for physical activity and environmental learning. Multiple outdoor covered areas are used for classes, small group lessons, and presentations throughout the year. The addition of the second floor is oriented parallel to the adjacent marsh which creates an additional large, covered outdoor space underneath which is utilized for outdoor classes, recess play space, school gatherings, etc. Each week students have an opportunity to have class out on our dock to learn about the marsh ecosystem and all the wildlife that lives there. All classes regularly walk to the beach for beach sweeps, sand, beach and dune investigations, and seashell collection. Students are able to experience marine life firsthand through hands-on lessons, fishing, crabbing, and kayaking the waterways (an opportunity like no other!).



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

While we teach our students about being stewards of their environment, WBS integrates health and wellness for all students and staff on a daily basis. Students are welcomed into a clean, well-ventilated, and nurturing environment that fosters learning and exploration as well as social-emotional learning. Days begin with school-wide announcements, deep breathing exercises, celebrations and classroom. Morning Meetings build community. Our school social worker provides social-emotional learning opportunities to all classes, small groups, and individual sessions, as well as professional development to our staff. Our full-time school nurse is available to students for all acute and emergent needs as well as provides information on health and wellness.

The staff works together to promote active lifestyles and improve the overall health of our students. During the day, our students engage in movement breaks and brain breaks to help them maintain focus. Our certified Physical Education teacher provides skill-based lessons that integrate health and wellness in a variety of ways for students each week. Students regularly use the outdoor playground facilities, the paved track around the playground, funded by the WBS Foundation, and kayaks. Added opportunities for organized physical activity have been brought to WBS in the way of our morning “Get Up and Move”, the afternoon running clubs - Girls on the Run and STRIDES - as well as our Ride your Bike to School annual event. This opportunity to exercise together promotes community, builds friendships, and prepares the students to engage in the day’s lessons.

Through the continual involvement of our PTA, WBS Foundation, families, staff and community, WBS continues to find ways to keep our students active, healthy and supported. It is our top priority that our students are equipped with the tools and skills necessary to be successful in all aspects of life.

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

WBS utilizes its natural surroundings to enhance student learning by providing authentic experiences through a strong Marine Science Program. The only one of its kind in the region, our Marine Science program plays a significant role in the culture of the school as life lessons of citizenship, team building, problem solving, and responsibility are embedded into the program. Integrating guidance and other contents engages as well as motivates our students. Plus, it provides a plethora of volunteer and community partnership opportunities.

Throughout the program, students demonstrate use of problem-solving, critical and analytical thinking skills, writing, math, reading information text and solving real-world problems through hands-on activities. With the help of parent volunteers, students collect and record data on water quality, tide levels, and the number of fish and crabs caught during each class for cross-curricular lessons. Reading assignments often focus on marine life and the environment, as this is a relevant part of our students’ everyday world. Studies about ecosystems come to life through field trips and hands-on explorations of the salt marsh flora and fauna as well as tidal islands. All classes regularly walk to the beach for beach sweeps, sand, beach and dune investigations, and seashell collection.

When connecting our students to real-world examples and lessons, community outreach and partnership play significant roles in our programming. WBS has been able to connect with many organizations to provide



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various learning opportunities for our students, families, and staff. Examples of these community outreach programs include participating in beach sweeps and creating signage for the local nature sanctuaries. Partnerships with several organizations have provided our students opportunities to learn how our ecosystem is affected by how we live and the things we do. With each organization, our students are provided lessons, presentations, and activities that directly correlate to marine debris, conservation efforts, and promoting the safety of marine life and local habitat. The ongoing partnership with UNCW, the Town of Wrightsville Beach, and Masonboro.org add integral elements to our sustainability education through our Marine Science program.

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

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

Throughout the planning of the Wrightsville Beach Elementary school renovation, the New Hanover County Schools' Facilities Department along with the architects and builders, worked tirelessly to bring our school up to date with systems that improve our gas emissions, incorporate green initiatives, reduce waste and save energy. It has been beyond challenging to have this project completed while directly in the throes of the COVID-19 pandemic but this much anticipated, multi-year renovation process has eliminated the use of trailers, brought all students under one roof, and reduces the impact on our local environment.

**Energy Efficiency and Water Conservation** - From an architectural standpoint, the new second floor addition elevates new classrooms to provide views of our surrounding environment and promotes daylighting. It was rotated over the existing structure to preserve the integrity of the original building and also strategically oriented to maximize the sun's solar energy. Roof overhangs, exterior sunshades and specialized glass were used to accomplish daylight without heat gain (Lisk, 2020, p. 56). The large windows in the classrooms and clerestory in the corridor help to naturally light interior spaces and reduce the need for electricity. Site design as part of the new construction included intentional efforts to reduce storm water runoff and erosion into bordering local waterways. This was accomplished in part by directing the storm water drainage from the building into two new French Drain systems.

Energy consumption will be reduced in the water heater and associated components by incorporating circular pump controls through a DDC control system and aquastat. New controls only allow circular pumps to operate based on building occupancy schedule and temperature set points. Occupancy vacancy sensors are used for lighting control in almost all spaces to reduce our use of electricity. The sensors are set to turn on when motion is detected and turn off within a set amount of time of no movement. Exterior lights are controlled by a photocell to prevent daytime operation. Additionally, sensors are used to control exhaust fans in bathrooms. With a 31,695 square foot building, this will not only save money but significantly reduce our impact on the environment.

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Water is supplied through the municipal water system. The Town of Wrightsville Beach uses groundwater in elevated tanks from the PeeDee Aquifer. All water facilities are monitored using a Supervisory Control and Data Acquisition System (SCADA). The installation of new plumbing and upgrading old plumbing was planned to reduce consumption and cost of domestic water by installing low flow fixtures and waterless urinals throughout the school (see below).

- Toilets
  - Baseline – 1.6 gallons per flush
  - Actual – 1.28 gallons per flush
- Sinks
  - Baseline – 2.2 gallons per minute
  - Actual – 1.5 gallons per minute

The landscaping around WBS is designed to include native plants and vegetation that are already acclimated to our environment which allows us to utilize rainfall as opposed to installing irrigation systems. This year, through a grant from the New Hanover County Extension Master Gardener Volunteer Association, our parent-lead WBS “Green Team” is reinstalling raised garden beds, and for the first time installing a Rain Garden on our school grounds. This Rain Garden is designed to be an outdoor, hands-on learning area for students, teachers, staff, parents, and the community to learn about water runoff, sustainable garden design, native plants, and rain barrels. No pesticides or chemicals are used which protects the wildlife, landscaping, and waterways, drastically reducing our impact on the environment and the future of our surroundings.

You can read more about our renovation in this article from *Wrightsville Beach Magazine*:  
<https://wrightsvillebeachmagazine.com/let-the-light-shine/>

(Picture 2 - Raised Garden Bed)

**Transportation** - The students of WBS utilize various modes of transportation for their daily commute to school. 34% of students ride the bus, 12 to 15% walk or ride their bikes to school, and a significant number of car riders choose to carpool. WBS has separate pick up areas for walkers/bikers and car riders to reduce wait time and idling. Buses and vans depart first to decrease idling time. WBS is currently in the planning stage of implementing an online technology to more efficiently line students up and load cars more efficiently. These practices are among those that demonstrate a collective effort to reduce our carbon footprint. It is also a demonstration of the WBS school community’s commitment to healthy living.

**Recycling and Waste Reduction** - Even before our renovation, WBS has focused efforts on waste reduction initiatives and protecting our environment through our Marine Science Program. Although some of it looks different due to the current COVID-19 pandemic, many of our initiatives have continued. Recycling, for example, has been a staple initiative at WBS. Through participation in the Crayola ColorCycle and the PepsiCo Recycle Rally, our students are immersed in the process of revitalizing and sustaining our environment. Recycling bins have been provided by PepsiCo along with lesson plans, supplies and incentives to inspire students to become proud and frequent recyclers.



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The 4<sup>th</sup> grade students at WBS are responsible for regularly checking the recycling bins and taking items to the commercial pick-up bin, located outside the school. The students collect data on the types of items collected and the amounts in each collection. The data is recorded on the PepsiCo Recycle Rally webpage to earn points that can be redeemed for additional supplies or to make donations to The Nature Conservancy. To keep this program alive and revitalize it, the 4<sup>th</sup> grade Marine Science curriculum is primarily focused on the 4Rs - Reduce, Reuse, Recycle and Refuse – and acquiring knowledge about the composition of plastics. Students learn how long various items take to decompose and each year produce education videos shared with students school-wide to reinforce the importance of recycling.

(Picture 3 – Recycling Fashion Show)

At WBS, our students learn environmental stewardship and our school community collaborates with partners and agencies that assist in keeping our natural world around us better than it was when we found it. Due to our working relationship with the town of Wrightsville Beach, the WBS Marine Science Program was a catalyst for keeping motorized watercraft from traveling south of the West Salisbury Street bridge. The West Salisbury Street bridge crosses over what could be considered the start of our sacred saltwater sanctuary that sits directly west of the campus and serves as our outdoor learning lab for Marine Science. Keeping motorized watercraft out of the creek not only protects our environment, but it also demonstrates the local support, awareness, respect and cooperation the town of Wrightsville Beach has for the WBS Marine Science Program.

**Outdoor Learning Spaces** - When it comes to outdoor spaces, the beach is in many regards our “playground” as a key part of our environment. The school property has multiple areas for classes to be held outside as well as for physical activity and environmental learning. Multiple outdoor covered areas are used for classes, small group lessons, and presentations throughout the year. The addition of the second floor is oriented parallel to the adjacent marsh which creates an additional large, covered outdoor space underneath which is utilized for outdoor classes, recess play space, school gatherings, etc. WBS also has a large outdoor area that contains soil material from a phosphate mine, material rich with marine fossils which date back to the Eocene Epoch. Each week students have an opportunity to have class out on our dock to learn about the marsh ecosystem and all the wildlife that lives there. All classes regularly walk to the beach for beach sweeps, sand, beach and dune investigations, and seashell collection. Having water access and being able to learn in the outdoor spaces we have is integral to our daily WBS community of learners. Students are able to experience marine life firsthand through hands- on lessons, fishing, crabbing, and kayaking the waterways (an opportunity like no other!).

(Picture 4 – Kayaking)

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

While we teach our students about being stewards of their environment, WBS integrates health and wellness for all students and staff on a daily basis. Students are welcomed into a clean, well-ventilated, and nurturing environment that fosters learning and exploration as well as social-emotional learning. The extensive nature of the recent construction on our campus allowed the opportunity to utilize efficient building systems and finishes



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that simplify cleaning and enhancing overall ability to operate / maintain our school. The end result is a healthy and sustainable facility that supports teachers and staff as they work together to ensure student needs are met in a variety of ways.

**Coordinated School Health, Mental Health, School Climate, and Safety** - Wrightsville Beach Elementary and The New Hanover County School system is focused on ensuring our students are working in a safe environment. Together, we support clean and safe facilities for its staff, students and the public. To that end, the school system has a policy that states the required use of an Integrated Pest Management (IPM) Program to prevent and control pest problems in school buildings and grounds and minimize pesticide use. As with many schools, we have reassessed our maintenance and cleaning procedures due to the COVID-19 pandemic. Our team ensures that our heating and cooling systems are properly maintained, classrooms are effectively cleaned as well as equipped with the necessary supplies, and that all cleaning products are safe for our students, staff and visitors.

WBS has a full-time school nurse through the cooperation between NHCS and the New Hanover County Health Department. The nurse provides direct care for acute and emergent needs as well as case management for chronic needs. It is imperative that the school nurse advocate for students and their families to help get the resources and support they need.

In addition to the New Hanover County School's Safety and Crisis Management department that guides and supports all schools within the system, WBS also collaborates with the New Hanover County Sheriff's Department, Wrightsville Beach Police Department and Fire Department to ensure safety and wellness for all students. The New Hanover County Sheriff's department dedicates an SRO (School Resource Officer) to serve WBS and the Wrightsville Beach Police Department designates an officer liaison to serve as an additional ally for safety, security, and education. Annually, our 5th grade participates in the G.R.E.A.T Program (Gang Resistance Education and Training) which focuses on building strong communities and preventing youth crime, violence and gang participation and our 2nd grade participates in the fire prevention and safety program.

**Social-Emotional Learning** - Our daily announcements include the Pledge of Allegiance, the WBS S.U.R.F. Pledge, birthday celebrations a moment of silence as well as an opportunity for a daily school-wide breathing practice. When instructed to do so, all teachers simultaneously use a research-based breathing video to guide students through a two-minute breathing meditation. The S.U.R.F. Pledge is unique to WBS and students recite it daily: *"I am a Wrightsville Beach Dolphin and today I pledge to SURF. I will Show responsibility, Use safety, Respect myself and others and I will Focus and work hard"*. This daily routine brings the school community together, helps students become calm and focused for the day ahead.

Within the classroom lessons, teachers utilize morning meetings to build community, form emotional connections, and teach respect within the class. The School Counselor uses a variety of resources to teach social-emotional skills and mental well-being to students. Through classroom lessons, small group sessions, individual counseling and staff professional development, our Counselor directly connects these skills to our students and staff.



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**Physical Activity** - The importance of physical activity and how it keeps us both physically and mentally healthy is the responsibility of all teachers and staff to promote at WBS. During the day, our students engage in movement breaks through “Go Noodle” as well as Mindset breathing techniques and Chime time to promote focus. Yoga in the classroom has been integrated across grade levels and the 5<sup>th</sup> grade took part in a yoga program facilitated by the school counselor for the first-time last year. Our certified Physical Education teacher provides skill-based lessons that integrate health and wellness in a variety of ways for students each week.

(Picture 5 – Outside Yoga Class)

Being part of an active beach community in Southeastern NC provides many opportunities for our students to get outside. With mild winters, the weather is inviting year-round for outdoor activities which allows for our students and staff to enjoy the fresh air and move daily. Students regularly use the outdoor playground facilities, the paved track around the playground, funded by the WBS Foundation, and kayaks, one of the most unique activities WBS has to offer! All grade levels walk laps around the track daily as part of their recess time and during their PE classes. Teachers and staff members from all departments are seen walking the track throughout the day which reiterates the message of health, wellness and self-care.

For the past 4 years, the PE teacher hosted a morning “Get Up and Move” session 4 days a week prior to the start of the school day. Complete with upbeat music, students walk or run their laps together. Laps are counted daily to track progress over the course of the year. This opportunity to exercise together promotes community, builds friendships and prepares the students to engage in the day’s lessons ahead.

Additionally, WBS participates in a few other programs that promote physical activity and wellness. Once a year, WBS hosts a “Ride Your Bike to School” Day, which has become a favorite for many! The families that live close enough to school are encouraged to ride their bikes or walk to school. The families who live “off the island” are encouraged to drive to the nearby Wrightsville Beach Parks and Recreation Center with their bikes as a meeting point then bike to school together. The Wrightsville Beach Police Department provides escorts and the very large group rides their bikes down the main road directly to the school very much in a parade like fashion. There is an escort back to the Recreation Center after school as well. The staff is also encouraged to ride their bikes to school if they live close enough!

(Picture 6 – Ride Your Bike to School Day)

Afterschool, WBS hosts running clubs for both boys and girls. The national program, Girls on the Run, was brought to WBS in 2000 by our school counselor. It was the first school in New Hanover County to participate in the program which has grown to over 20 schools. Both Girls on the Run and the boys’ program, STRIDE, are facilitated by parent volunteers and are life-changing, interactive learning programs that use the power of running to inspire preteen boys and girls for a lifetime of self-respect and healthy lifestyles. Through activities such as running, playing games, and group discussions, the programs promote positive emotional, social, mental, and physical development. Students participate through this fun and uplifting curriculum while training together for a 5K event.



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As a 5<sup>th</sup> grade opportunity, WBS holds an annual 5th Grade Kayak Race. Fifth grade students are taught to paddle in tandem kayaks. A racecourse is set up using motorboats that are manned with parents and teachers. While navigating the racecourse and passing each motorboat, students are required, as a team, to answer academic questions. This event teaches paddling skills, promotes teamwork, and is an end-of-year academic review.

With the abundance of outdoor activities inherent to our Marine Science Program and active lifestyle initiatives, it is necessary that we intentionally reinforce sun/skin safety with our students at WBS. The School Counselor uses *Sunny Days Healthy Ways*, an evidence-based sun safety curriculum, to teach sun protection education for grades K-5.

**Family Engagement and Involvement** - WBS is part of a highly-involved school community with a rich history of dedicated parent volunteerism and support. Through the ongoing involvement of the PTA, WBS Foundation, business partners, families, staff and community as a whole, WBS continues to find ways to keep our students active, healthy and supported. It is the top priority that WBS students are equipped with the tools and skills necessary to be successful in all aspects of life.

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

WBS utilizes its natural surroundings to enhance student learning by providing authentic experiences through a strong Marine Science Program. The only one of its kind in the region, our Marine Science program plays a significant role in the culture of the school as life lessons of citizenship, team building, problem solving, and responsibility are embedded into the program. Integrating guidance and other contents engages as well as motivates our students. Plus, it provides a plethora of volunteer and community partnership opportunities. Together, we are committed to providing high quality and challenging education with a key focus on the marine environment.

**Integrated Sustainability Education and Interdisciplinary Learning** - The WBS Marine Science/Environmental Education Program at WBS, established in the 2000-2001 school year, is a school-wide program facilitated by the school counselor who also serves as the Marine Science Coordinator and is the winner of the 2015 Wrightsville Beach Museum's Waterman Hall of Fame.

Over the past twenty years, the program has grown to encompass Outdoor Marine Science and Environmental Education (both on and off campus), classroom education, community outreach, interdisciplinary learning and citizen science projects. All MS/EE programs and activities are designed to support the Standard Course of Study for each grade as established by the North Carolina Department of Public Instruction. At WBS, Marine Science and Environmental Education is strategically integrated into the academic curriculum in every class at each grade, and therefore is attributed to improved school-wide student performance indicators including local classroom assessments as well as state standardized assessments; most notably the North Carolina 5th Grade Science End of Grade Test.



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With the premise that student interest in the natural world provides a bridge to many other subject areas and concepts, the Marine Science Program incorporates key skills and standards students need to be college and career ready.

- *Kindergarten* - Students learn about a wide array of marine animals through a series of books by a local author, Susanne Tate. This series combines factual information about marine animals with social/emotional learning. Live and preserved specimens are always a part of the lesson.
- *First Grade* - Students learn about fish and about the salt marsh ecosystem.
- *Second Grade* - Students learn about marine invertebrates.
- *Third Grade* - Students learn about tides, sea level rise, climate change, along with sharks, sea turtles, and whales.
- *Fourth Grade* - Students about marine debris, recycling, and marine invertebrates.
- *Fifth Grade* - Students learn about barrier island ecosystems and shorebirds.

Throughout the program, students demonstrate use of problem-solving, critical and analytical thinking skills, writing, math, reading information text and solving real-world problems. Each week, classes go out on the dock for their lesson and hands-on activities. With the help of parent volunteers, students collect and record data on water quality, tide levels, and the number of fish and crabs caught during each class. This data is posted inside the school building and is given to all teachers to use in the classroom curriculum. Reading assignments often focus on marine life and the environment, as this is a relevant part of our students' everyday world. Studies about ecosystems come to life through field trips and hands-on explorations of the salt marsh flora and fauna as well as tidal islands.

All classes regularly walk to the beach for beach sweeps, sand, beach and dune investigations, and seashell collection. Students take walking trips to nearby docks to learn about marine invertebrate fouling organisms. To learn about Barrier Island and surrounding ecosystems, 5th grade students go on walking tours of the salt marsh, maritime forest, dune, and beach ecosystems. In addition, they go by boat to a neighboring uninhabited barrier island, Masonboro Island. To learn about other ecosystems in New Hanover County, they go on several educational field trips to nearby state and county parks.

WBS has a large outdoor area that contains soil material from a phosphate mine, material rich with marine fossils which date back to the Eocene Epoch. Students visit the "Shark Tooth Pile" on a regular basis. Students learn about fossil formation, shark teeth variations, and about the marine vertebrates and invertebrates that inhabited the ocean during that time in the earth's history. Throughout the years, we have had school-wide presentations from a local, nationally recognized fossil hunter, and from a local shark tooth merchant.

The academic impact of the Marine Science program is strongly evidenced by the fact that our 5th grade students regularly have the top scores for New Hanover County in the North Carolina End-of-Grade Science Test. This can, in part, be attributed to accumulated knowledge gained through the years of hands-on, real-life experiences and opportunities afforded to students by our Marine Science Program.

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During the 2000-2001 school year, WBS became a designated UTOTES School. The North Carolina Museum of Natural Sciences “Using The Outdoors to Teach Experiential Science (UTOTES)” program provides teachers with the knowledge and resources to use school grounds to teach environmental education. Through this program, teachers attended six workshops to foster a culture of outdoor awareness and environmental stewardship. We were provided materials to support the program and allow teachers to easily implement activities including tools and equipment, field guides and other references, activity guides and handouts, and plants and other resources for habitat projects, such as constructing an outdoor learning amphitheater and multiple school gardens.

Teachers continue to take advantage of opportunities that advance their knowledge of environmental sciences. They have been afforded Professional Development opportunities offered by professional organizations and by the State of North Carolina, and they gain knowledge by their regular participation in such activities as kayak trips, dock lessons, field trips, and our annual Marine Science Festival. The WBS MS/EE program educates not only our students, but also educates and promotes environmental awareness and stewardship in teachers, staff, parents, and the community.

(Picture 7 and 8 – Marine Science Program in Action)

**Community Involvement** - When connecting our students to real-world examples and lessons, community outreach plays a significant role in our programming. WBS has been able to connect with many organizations to provide various learning opportunities for our students, families and staff.

- Shorebird Sanctuary Signs: 5th grade students work with Audubon NC and the Harbor Island Garden Club in the maintenance of the Shorebird Sanctuaries located on local beaches. Students create signs to educate the public about these important sanctuaries. Students have also participated in posting the signs and clearing vegetation to improve sanctuary zones.
- Beach Sweeps: All classes participate in beach sweeps throughout the school year. Students collect data on debris collected and report the data to the Ocean Conservancy International Coastal Cleanup. In the spring, we also hold a school-wide beach cleanup. With approximately 400 students, staff, and parents participating, we not only remove trash from beaches, but demonstrate to the community the importance of keeping our beaches and oceans free of debris.
- Environmental Signs around “The Loop”: The Town of Wrightsville Beach (WB) has an extremely popular 3-mile pedestrian walk that encircles the center of the beach, known as “The Loop.” WBS students create signs for the Town of WB that reminds the public to pick up their dog waste, to refrain from littering, informs of a non-smoking policy on the beach, and educates the public about marine debris.
- WBS Salt Marsh Ecosystem signs: The four educational signs which are standing at the entrance to our school dock provide information about the salt marsh for students, teachers, parents, and the community.
- Extension classes for other New Hanover County Schools: Every year, we have several schools in the New Hanover County Schools System visit WBS for activities on the dock and kayaking.

(Picture 9 - Beach Sweep) (Picture 10 - Salt Marsh Ecosystem Signs)

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**Partnerships** - Connecting with the community has given us amazing opportunities to work with several organizations on an on-going basis. Partnering with them makes our Marine Science Program as well as our overall school learning environment what it is today. Our partnerships with UNCW Marine Quest, the UNCW Department of Environmental Sciences, and Masonboro.Org provide our students opportunities to learn how our ecosystem is affected by how we live and the things we do. With each organization, our students are provided lessons, presentations, and activities that directly correlate to marine debris, conservation efforts, and promoting the safety of marine life and local habitat.

- University of North Carolina at Wilmington (UNCW): We partner with the UNCW Department of Environmental Sciences to have a student intern each semester. We work with the UNCW Plastic Ocean Project Club. They provide lessons for students on marine debris.
- UNCW MarineQuest: MarineQuest is a marine science outreach program for UNCW. MarineQuest provides monthly, user-friendly marine science lessons for classroom teachers, and holds an annual, hands-on, school-wide presentation on various marine science topics.
- The Town of Wrightsville Beach (WB): Over the years, we have worked with the Town of WB on many projects, ranging from planting sea oats on the beach, vegetation removal from shorebird nesting areas, installing signs to educate the public and working to eliminate the use of motorized watercraft in the waterway adjacent to the school to protect the area.
- The Harbor Island Garden Club (HIGC): The HIGC sponsors a junior gardening club for fifth grade students, which teaches them about native plants, gardening, birding, butterflies, and environmental stewardship. This organization provides support and funding for the Audubon shorebirds signs, the signs for the Town of WB, the educational signs by our dock, field trips to local parks, and other educational opportunities.
- The NC Coastal Federation: Located within walking distance of our school, this non-profit organization provides MS/EE lessons for classes throughout the school year.
- Audubon NC: Audubon NC teaches fifth and fourth grade students about shorebirds. We work with them to create signs that educate the public about shorebirds and designate the boundaries of the shorebird sanctuaries on local beaches.
- Duke University Marine Labs (DUML): DUML Marine Debris Curriculum is a year-long, environmental interdisciplinary program for 4th and 5th grade students in North Carolina. They provide support for the curriculum activities and for our annual school-wide beach cleanup.
- North Carolina King Tides Project: This organization provides education and equipment for our students to participate in the King Tides Citizen Science Project.
- PepsiCo Recycle Rally: PepsiCo Recycle Rally is a free, nationwide school recycling program. It provides access to a vast array of resources and incentives to promote recycling.
- The Wrightsville Beach Sea Turtle Project (WBSTP): WBSTP provides hands-on lessons and activities for students to learn about sea turtles.
- Masonboro.org: Masonboro.org is a local non-profit which funds a science-based, hands-on field trip by boat to a neighboring uninhabited barrier island for New Hanover County fifth grade students. The program originated with WBS over 10 years ago.



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- WBS PTA: The WBS PTA funds equipment needs for the dock and for kayaking. The PTA Green Team is installing the Rain Garden (as mentioned above) and works to keep our school grounds attractive and sustainable.
- WB School Foundation: The WB School Foundation is a non-profit organization established to supplement and extend the financial support provided by the WBS PTA. Currently, they are raising funds to build a gazebo that will be a roof over the end of the WBS dock, which will provide an area for outdoor classroom activities and much-needed sun protection during dock sessions with students. Over the years, they have provided funds for science equipment and kayaks.

**Civic Engagement** - Citizen Science Projects have become a staple for our students to participate in. This year our 3<sup>rd</sup> grade students will be participating in the NC King Tides Project. The King Tides Project is an international citizen-science initiative which documents extreme high tide events. Using a tide gauge on the school dock, 3<sup>rd</sup> grade students record and submit data using the organization's online data collection tool. Prior to the kids collecting and reporting data, they will be taught in the classroom about tides, sea level change, and climate change.

Also this year Fourth grade students are going to design the signs that the Town of WB will post around "The Loop" a very popular walking trail for families and visitors that circles the inside of the island, crossing over several bridges and around the park. The theme for the signs is going to be Marine Debris. Prior to the students making the signs, they will be taught about debris (decomposition, biodegradation, and plastic breakdown), Watersheds, Gyres, and the impact of Marine Debris on animals. WBS hopes this can be an annual thing, so each year new signs from our school can be posted - keeping the message fresh and interesting for Loop Walkers.

In the past, students have participated in citizen science projects in conjunction with NC State University and UNCW, in which students collected and reported data on blue crab larva and oyster spat development.

As a culmination of all the students have learned in Marine Science, an annual Marine Science Festival is held on campus. Experts and professionals from a wide array of disciplines and local businesses share presentations as well as engage in hands-on activities with students. Over the past 18 years of this Festival, we have had, to mention a very few, presenters such as scuba divers, UNCW professors, boat captains, commercial fishermen, coastal musicians and artists, seashell experts, and many, many more.



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