

# BUCKINGHAM COUNTY SCHOOLS

BUCKINGHAM COUNTY PRIMARY & ELEMENTARY SCHOOLS AT THE CARTER G. WOODSON EDUCATION COMPLEX



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*"Our school has the wonderful opportunity to set an example for the community by showcasing the benefits of good nutrition and exercise. Our use of the outdoor spaces for gardening and the food lab and teaching kitchen for hands-on learning related to nutrition will provide real problem solving experiences for kids that will result in unforgettable learning."*

Pennie Allen, Principal  
Buckingham County Elementary  
School at the Carter G. Woodson  
Education Complex



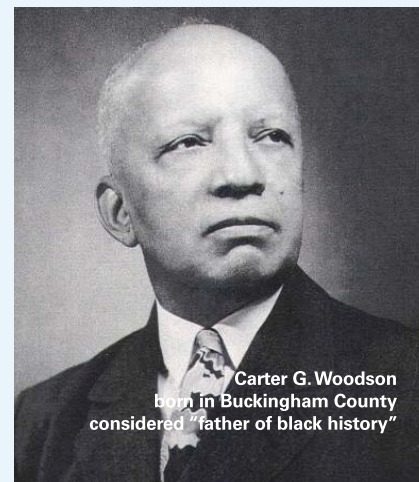
## PROJECT OVERVIEW

Two former Virginia mid-century schools, built in 1954 and 1962 respectively, have been re-fashioned as a modern learning campus for K-5 students with the aim to promote connectivity, creativity, health, and well-being for the Buckingham County community. The new campus design takes advantage of every space and surface to support teaching and learning both inside and outside the traditional classroom. Inside, the K-5 campus features a reconceived, central dining commons that – through the promotion of healthy eating habits, food stewardship, and sustainable dining operations – serves as a source of food-based education. Outside, grade-level appropriate gardens and play terraces encourage place-based learning and engagement with nature. With the support of the school district, the project team created a holistic indoor-outdoor learning environment that supports the physical and mental well being of the school community and fosters "food smart" children.

## HISTORY

The Buckingham County Training School, operating from 1924 to 1953 near the current site, was the first high school in the county for African American students. The school was supported in part by the Julius Rosenwald Fund, a monetary source associated with the Sears Roebuck Company that built schools for black students in the rural South.

In 1953, the Training School transitioned into the Stephen J. Ellis Elementary School, when the Carter G. Woodson High School for African Americans opened on the current primary and elementary school site. No longer used, the Training School property is being converted into a memorial park. The legacy of the Carter G. Woodson High School, and its famous Virginia-born namesake, continues on in the title of the current primary and elementary school – which is known as the Carter G. Woodson Education Complex.



Carter G. Woodson  
born in Buckingham County  
considered "father of black history"

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## SPACE MATTERS

### EXPLORING THE INTERIOR LEARNING ENVIRONMENT

The project team worked collaboratively to design a total learning environment that supports the whole child. Natural daylight and color palette were carefully considered and modulated to express nearby natural contexts, such as a pine and oak forest habitat, the Chesapeake Bay watershed, and small-scale garden courtyards. Throughout the campus, the color palette is integral to reinforcing grade-level identity, enhancing indoor-outdoor connections, communicating wayfinding techniques, encouraging the use of collaborative learning spaces, and promoting psychological health and wellbeing.

### ENVIRONMENTS TO INSPIRE

The K-5 campus incorporates new and renovated spaces meant to inspire students and prompt inquiry and exploration. In addition to core homerooms, each grade level has access to two small-group learning labs that transform everyday circulation paths into "learning streets." Child-centered learning areas, reading nooks, and breakout-spaces found off of these "streets" inspire creative exploration through intimately scaled furniture, soft seating, and beautiful colors that activate thought and play while reinforcing grade-level identity within open learning spaces.

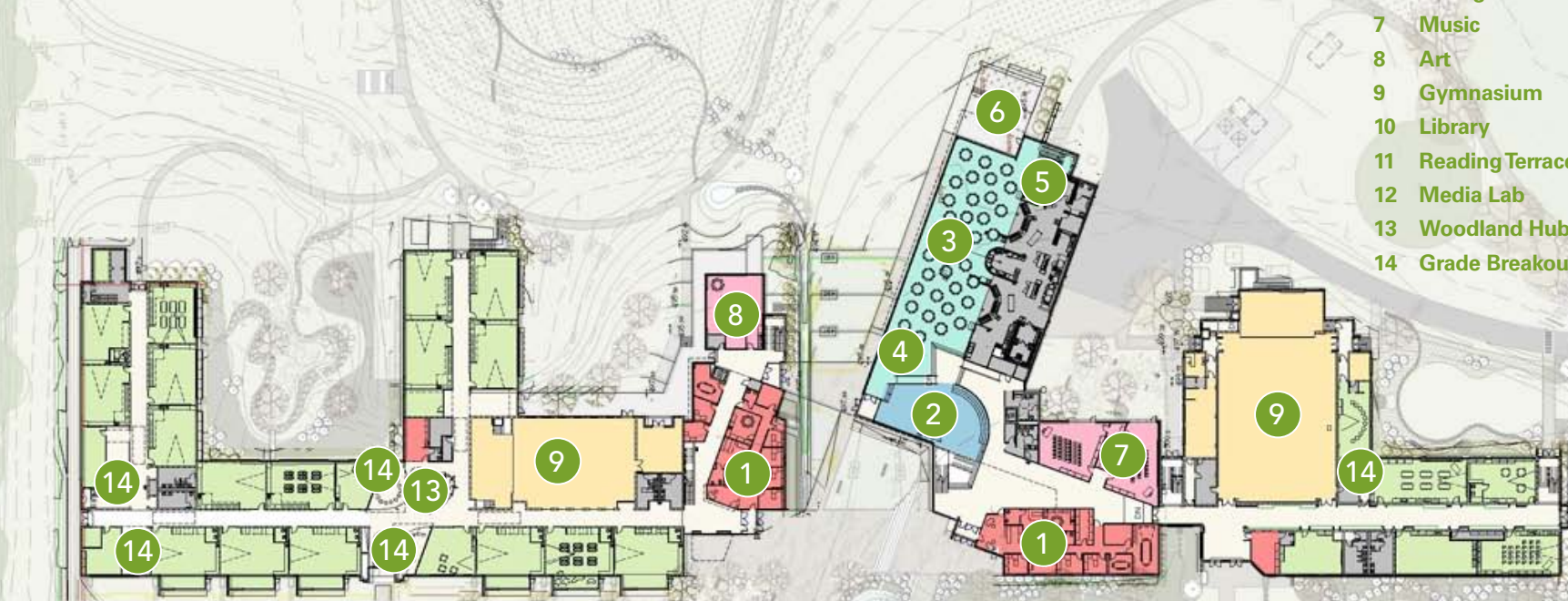
## SECOND FLOOR



### PLAN KEY

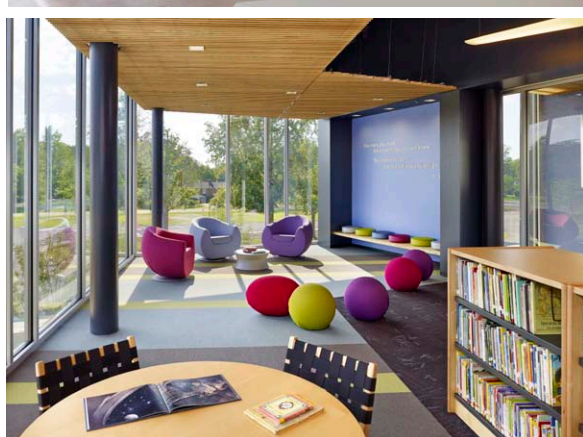
- 1 Administration
- 2 Community Meeting Room
- 3 Dining Commons
- 4 Food Lab
- 5 Kitchen Lab
- 6 Dining Terrace
- 7 Music
- 8 Art
- 9 Gymnasium
- 10 Library
- 11 Reading Terrace
- 12 Media Lab
- 13 Woodland Hub
- 14 Grade Breakout Spaces

## FIRST FLOOR



## PRIMARY SCHOOL

## ELEMENTARY SCHOOL



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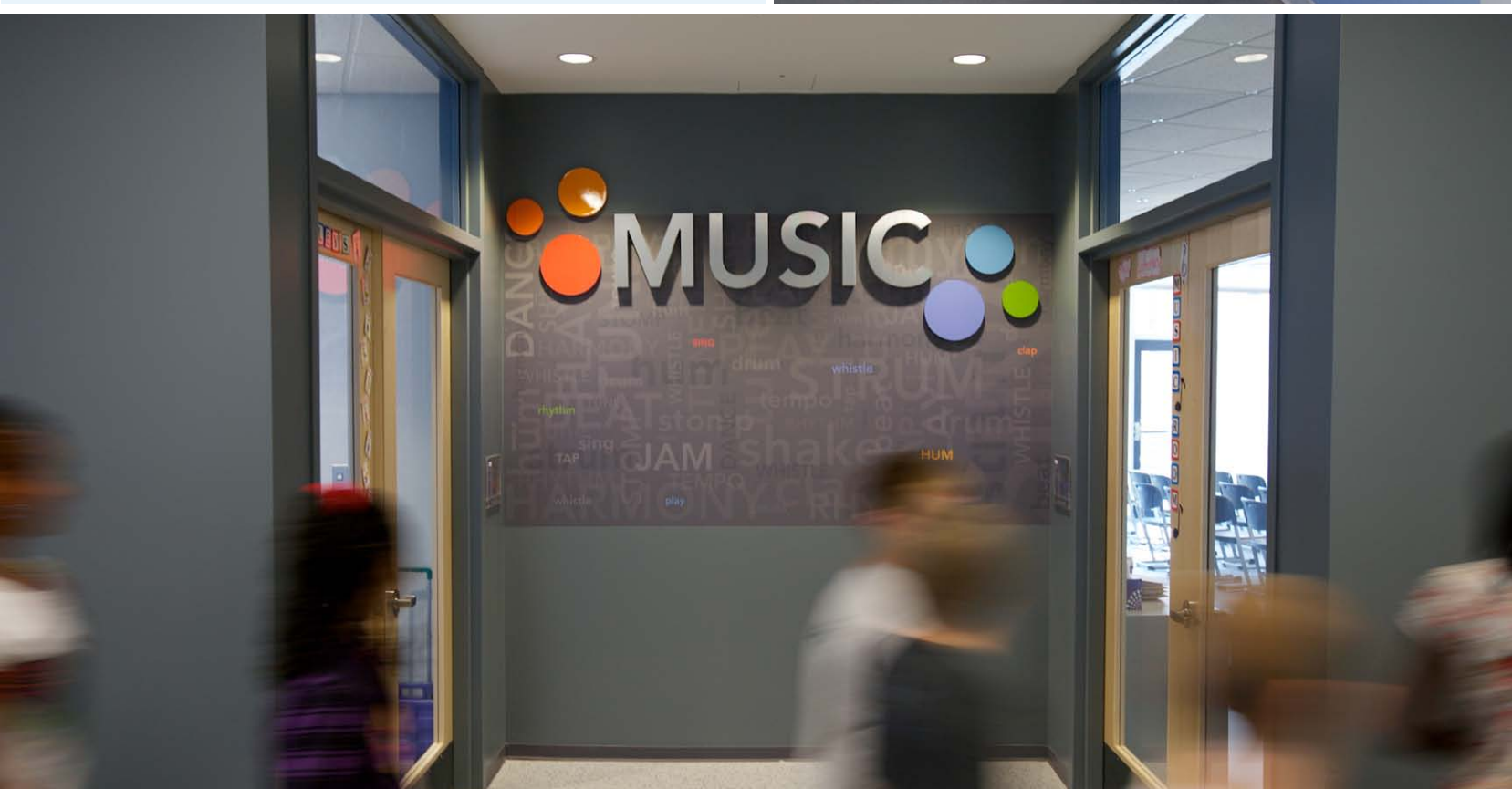
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## FINDING YOUR WAY

### EXPLORING VIRGINIA'S NATURAL LIVING LANDSCAPE

Navigating through the grades of Buckingham Primary & Elementary Schools is just like traveling through the landscape of Virginia! Moving west to east, from the Primary to the Elementary School, the campus' wayfinding follows the progression of Virginia's geography and assigns a biome to each grade level: mountains (Kindergarten), forest (1st grade), and prairies (2nd grade) in the Primary School, and wetlands (3rd grade), rivers (4th grade), and ocean (5th grade) in the Elementary School.

Classroom signage allows students to explore native plants and animals. Each classroom sign features its grade-level biome icon and a native plant or animal species found specifically in that habitat of Virginia. While the Primary School is associated with warm colors and terrestrial species, the Elementary School features cool colors and aquatic species. Such colors and imagery feature prominently throughout the school to encourage grade-level identity and to introduce students to elements of the natural world around them.

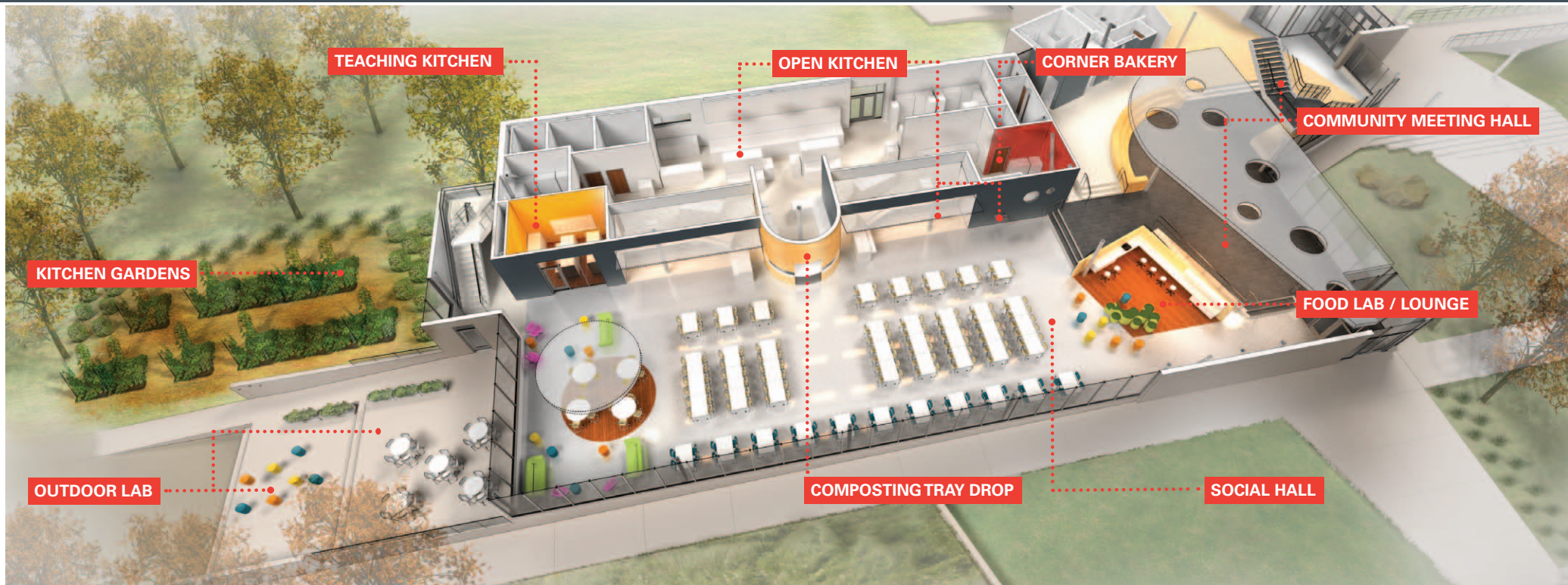


PRIMARY SCHOOL : VIRGINIA LAND ECO-REGIONS

PRIMARY SCHOOL : VIRGINIA WATER ECO-REGIONS

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## DINING COMMONS

### ONE BIG CLASSROOM

The dining commons is an enriched learning environment that serves as a shared, connecting space between the primary and elementary schools, and with the wider community. The commons includes a teaching kitchen, innovative food and nutritional displays, open serveries that promote demonstration cooking, a food lab/lounge for small group labs and catering, a scratch bakery, dehydrating food composter, natural daylight, flexible seating arrangements, an outdoor student dining terrace, and kitchen gardens.

The commercial kitchen in particular was designed to provide an important educational experience – retaining key food service functions while allowing students visual access to the kitchen as they move through the “open” serving lines. The transparent treatment of food in the school, from the gardens to the open serveries, allows students to gain awareness about how their food grows, how it is prepared in the kitchen, and how it fuels them in their activity and learning. These educational opportunities can create shifts in food culture and improve student health and well-being.

*“Preventing childhood obesity and helping to educate ‘food smart’ children is so important in today’s society. The value and potential results in offering unique features such as Buckingham’s food lab, teaching kitchen, edible native landscape, school gardens, fresh food storage, and exterior dining are obvious to me.”*

Todd P. Haymore,  
Virginia Secretary of Agriculture and Forestry

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## FOOD LITERACY

### CREATING FOODSMART KIDS

Creating school food environments that facilitate healthy eating among children is a recommended national strategy to help prevent and reduce childhood obesity. School design is known to impact student behavior, development, and academic performance. VMDO oversaw and supported the designs for architecture, interior spaces, graphics and wayfinding, and landscaping with the understanding that such design decisions can impact school practices and, subsequently, healthy eating behaviors among children and even community members.

VMDO incorporated the following healthy eating design strategies in the Buckingham campus:

- 1) Design spaces that facilitate the incorporation of fresh and healthy food choices into the school.
- 2) Design facilities that engage the school community in food production and preparation.
- 3) Apply evidence- and theory-based behavioral science principles to “nudge” the school community towards healthy-eating behaviors and attitudes.
- 4) Use building and landscape features to promote awareness of healthy and sustainable food practices.
- 5) Conceive and articulate school spaces as community assets to multiply the benefits of school-based healthy food initiatives.



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Students become environmental stewards through learning about their natural surroundings! The site fosters teachable moments throughout the landscape.

## PLAN KEY

- 1 Entry Courtyard
- 2 Naturalized Meadow Grass
- 3 Picnic Knoll
- 4 Frog Bog & Observation Deck
- 5 Tot Lot Natural Play Area
- 6 K-2 Play Terrace
- 7 3-5 Play Terrace
- 8 Walking Paths
- 9 Large Playfields
- 10 Composting & Dirt Lab
- 11 Dining & Classroom Terraces
- 12 Edible Gardens
- 13 Academic Gardens
- 14 Pollinator Garden
- 15 Rain Gardens
- 16 Sonata Music Garden

## SITE INITIATIVES

### PROMOTING ENVIRONMENTAL STEWARDSHIP

The site design promotes the importance of the natural environment in the daily experiences of students. This is enhanced through student participation in the revealed ecological processes and engineering functions of the school's built environment.

The site highlights the natural resources of the area. Gardens feature plant species found in the Piedmont region of Virginia, native grasses and wildflowers replace maintenance-heavy mown turf, and Buckingham slate and local kyanite appear prominently in the campus' exterior and interior details. A unique use of slate is found in the slate lined stormwater conveyance channel which cuts through the school's entry plaza, revealing the stone beneath the earth's surface. The channel visibly measures the size of storm events, so students can understand the occurrence and volume of water associated with each storm.

Other educational opportunities abound in the landscape, particularly in the gardens. The growth of edible plants and other food allows students to learn the science of horticulture and supports the lunch menu with nutritious options. A pollinator garden teaches students about native pollinating insects and animals vital to our ecosystem and agriculture. A science garden based on a 3-5 year succession cycle demonstrates the transitions and seasonal shifts of the Virginia Piedmont. In all, the campus landscape supports the school's core curriculum and fosters teachable moments, providing students with interactive experiences in the classroom, kitchen, gardens, and the surrounding environment.



Buckingham County's pine and oak forest habitat, water sources, and rock formations feature prominently throughout the architecture and active landscape of the school campus. Natural resources such as Buckingham slate, kyanite, and regional lumber are specifically showcased in the built environment to encourage place-based learning and support the use of local materials.

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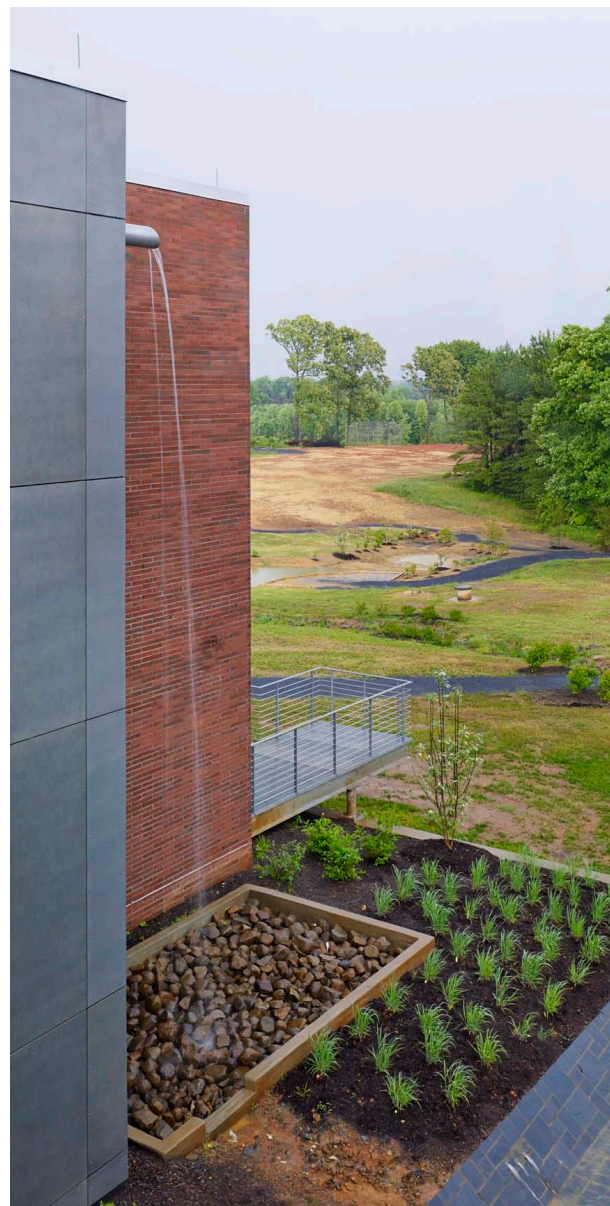
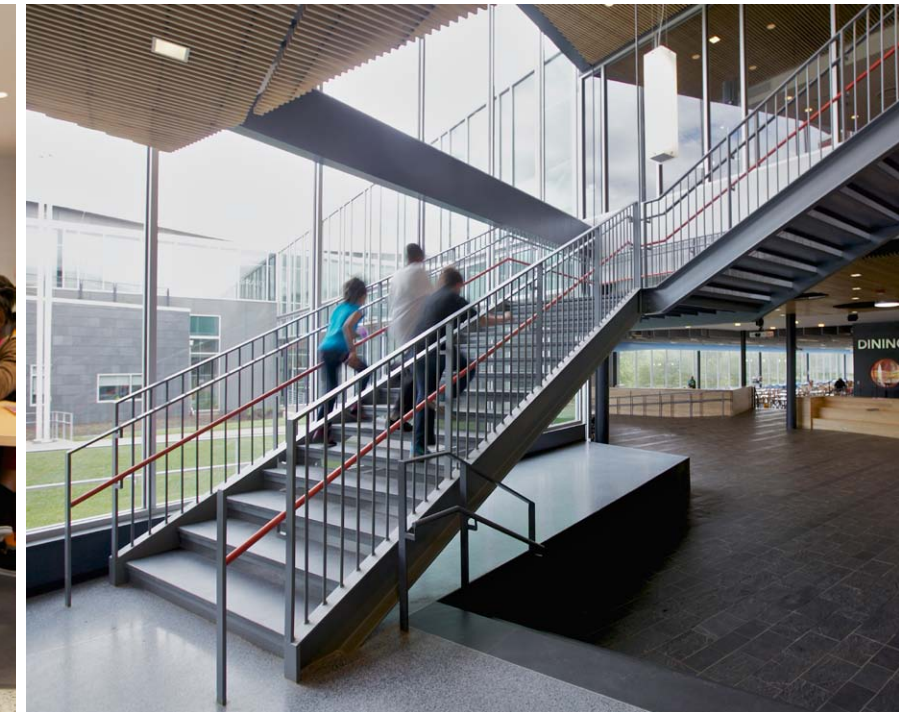
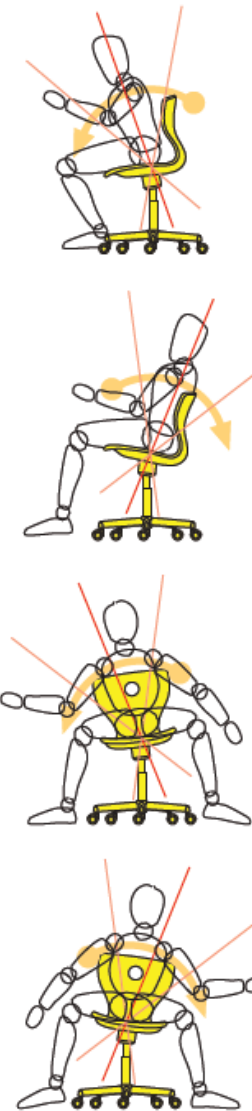
## HEALTH & WELLNESS

### ENVIRONMENTAL FEATURES & PRACTICES

The campus' design supports the health of students and the environment by incorporating sustainable features. Natural daylight from windows is supplemented with environmentally-friendly Solatube® daylight harvesting found in ceilings and light louvers in classrooms. A water-source heat pump system supports energy-efficient heating and cooling of the school, and innovative stormwater strategies integrate green space, native landscaping, and natural hydrologic functions to generate less runoff on the site. In addition, non-toxic materials were used throughout the construction process and new recycling programs are helping to divert substantial waste from landfills.

### MOVEMENT & ACTIVITY

Accommodating movement and encouraging learning through flexible, customizable spaces – inside and out – were strategies employed by the design team to increase engagement, concentration, and health among students. Physical design elements such as circulation hallways, open gathering spaces, and outdoor gardens and play terraces encourage movement and interaction among the school community. On a smaller scale, specific features such as cushioned gym floors, well ventilated and naturally lit classrooms, and flexible furniture allowing for easy arrangement and adjustment support movement and enhance the learning experience for students.



## DESIGNS WITH PURPOSE

VMDO Architects is currently partnered with various educators, public health scientists from the University of Virginia and University of Nebraska, and the ergonomic furniture manufacturer VS to develop new design strategies that create healthy learning environments for children and communities. This design-research-education collaborative is working to provide practitioners in the architecture, education, and public health fields with new insight into making school environments more conducive to healthy eating and movement. The impact of these guidelines is expected to improve schools' ability to adopt healthy nutrition programming and practices and increase the likelihood that children will improve their diet and health.

*"If we can make healthy eating and physical activity the easy and default option in the school environment, we will help children practice a healthy lifestyle without making it seem like work. Over time, healthy lifestyles become healthy habits that endure. The key to obesity prevention is to work across multiple levels, from individual children to parents, schools, and the community, simultaneously."*

Dr. Terry T-K Huang, PhD, MPH, CPH



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One touch of nature  
makes the whole world kin.

William Shakespeare

