

Sixth-grade students take their humanities class outdoors to practice readings.

Thinking Outside the School

On a day in April, lower school students file into Ms. Petzold's science classroom. Outside, the air is warm. The class windows frame a sloping lawn that meanders past a small stand of trees to a meadow alive with native Wisconsin grasses, plants, birds, and insects. The prairie, carved with walking trails, stretches out to meet the Yahara River opening to the larger Cherokee Lake, water sparkling in the mid-day sunshine. Students buzz with energy when they realize they're heading outside for science class. Their teacher shares the enthusiasm for outdoor science activities. "When they see that I have on my jacket or hat, they are excited without even knowing what we are going to be doing," Ms. Petzold remarks. "Students are excited when they can connect with nature—finding deer tracks on the playground, playing with a cool stick or rock, or watching when sandhill cranes fly overhead."



Gabby '23 collects samples of plants in the prairie for her observational drawing of natural objects in Ms. Taylor's art class.



Ms. Kendrick examines the turbidity of water in Lake Cherokee with students in middle school science.

The outdoor campus at MCDS

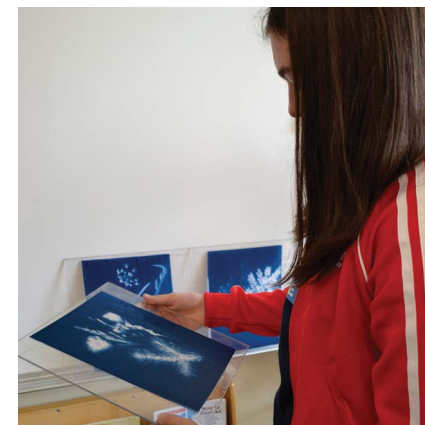
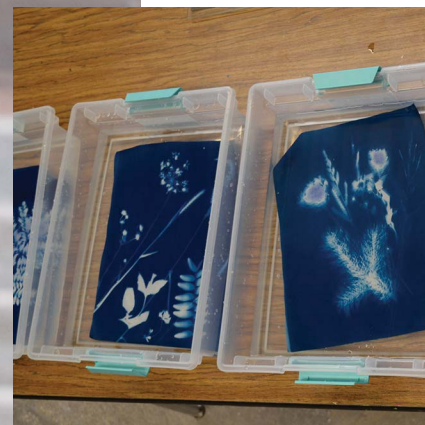
is as much a part of learning here as textbooks, number two pencils, and ruled paper. Outdoor activities that connect MCDS students to their surroundings foster the relationship students have with the natural world. The outdoor campus gives them hands-on experience for learning and inspires creativity. The enthusiasm and energy students show toward outdoor learning is shared by the faculty at MCDS. According to third-grade teacher Galen Wiese, "We are lucky to have a convergence of ecosystems—prairie, wetland, lake, and forest—in our backyard. Each provides opportunities for exploration and learning."

Interim Head of School Devon Davis agrees: "Our beautiful campus lends itself to a multitude of outdoor

opportunities, from writing poetry to learning how to kayak to hiking the trails, from building forts to sledding to finding a tree to read under. Just today, I watched sixth-grade humanities students acting out a scene from their class book, first graders writing poems about nature, high schoolers eating on the terrace, and middle schoolers playing in every space available on our new playground."

Inspiration

Just a few miles from the heart of Madison, the MCDS campus consists of 40 acres of prairie, woodlands, and Yahara River shorefront. Secluded from the noise and



Bottom, l-r: Kaebren '22 and Elena '22 use selected prairie plants to compose their designs on the pretreated fabric sheets for the cyanotype photographic process.

Students expose their plant designs to direct sunlight.

After removing the plants, the pretreated sheets are submerged in water.

The fabric quickly turns blue, revealing the negative image of the objects.

Claire '22 examines her final image, learning about the negative and positive spaces to be considered in creating a visually balanced design.



Third-grade students mix compost in the school garden soil to prepare it for planting.

traffic of the city, the campus features athletic fields, a running track, and miles of trails. It is also home to sandhill cranes, frogs, squirrels, and many other animals. The vista alone energizes students and teachers. “The view from our classrooms is nourishing to the soul,” remarks Erin Rumschlag, resource teacher and director of after-school programs.

The diverse landscape of the MCDS campus sets the stage for an unlimited variety of outdoor lessons. Ms. Petzold explains, “Nature gives purpose to lessons. We can see the beauty and students know that it is special. It lets them naturally think of things like, ‘Let’s plant trees,’ or ‘Let’s pick up trash,’ or ‘Let’s pull invasive species,’ and they are excited to contribute positively to nature.”

However, science is just one discipline that benefits from the use of the outdoor campus. Art classes in all grades use the expansive landscape as inspiration for observational drawings and to find natural art supplies from which to create works of art. Middle school art teacher Zachary Sea explains that the most important goal of taking his students outside for art class is to allow them to take inspiration from nature.

Karla Rempe agrees that these benefits extend to her middle school humanities students. “The change of scenery—beautiful scenery—can refocus, recharge, and inspire the students,” she explains. “When students hit that brick wall during the writing process or are brainstorming an idea, we use the trails to walk with a fellow writer to discuss and seek feedback. We then return to our writing, refreshed and ready to make revisions.”

Focus

Mr. Wiese adds that beyond gaining inspiration, students learn a variety of skills in the open air. “In third grade, we often take students out to explore our campus. The goal of this open-ended exploration is to promote creativity, innovation, teamwork, and curiosity. Students often go off exploring in a group and need to work as a team. They have the opportunity to engage in imaginative play without props or tools and often return with a new curiosity about things they saw.”

Athletic Director Jeremy Clements points out that for many physical education activities, “being outdoors is a necessity.” MCDS students are fortunate to have the space for “canoeing, kayaking, golf, soccer, football, lacrosse, track and field, rugby, cross country skiing, disc golf, trail running, softball, kickball . . . We likely spend more time outside than other academic

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—Karla Rempe



Ms. Dalland and her sixth-grade students act out *A Midsummer Night’s Dream* and discuss the emphasis of certain words.



Mr. Wieseman and Colin '22 check their safety goggles as Mr. Eaton increases the water pressure with Kenton '22 before launching a bottle rocket made by Science Olympiad students.



Bridget '28 plants squash in the "Three Sisters" garden, a traditional Native American garden in which beans, corn, and squash are planted together as companion plants.

departments," Mr. Clements explains. The variety of these spaces at MCDS is plentiful. The soccer fields, walking trails, Cherokee Lake waterfront, and track give students ample room to fine-tune their physical skills.

In the older grades, the use of the outdoor spaces for science builds in variety and complexity. Middle school students conduct weather experiments, go on habitat hikes, plant gardens, analyze water samples from the river, and collect seeds from the forest. Last school year, Facilities Director Roger Seaver helped Sarah Kendrick teach her middle school science students about water flow at MCDS. "Mr. Seaver took us on a water walk . . . to show us what happens to all of the water on campus. For example, he showed us where the well is, how parking lot runoff is managed, and what purpose the retention pond behind our school serves," she says. "We also go into Cherokee Lake to do water quality testing as part of our water and ecosystems unit."

While outdoor learning can have some drawbacks such as excessive heat, bugs, and additional transition time for classes, faculty agree the benefits dramatically outweigh the disadvantages.

Connection

Although outdoor learning can require advance planning and the ability to be flexible with lessons, the benefits of connecting with nature make the trouble worthwhile. The main benefit Ms. Kendrick sees from students taking advantage of the outdoor campus is "for students to gain a sense of place and understand how they are connected to the larger world around them."

As MCDS changes and evolves, so have our outdoor learning opportunities and activities. Students can use outdoor spaces more than ever before to connect and engage with nature and the outdoors. Educational Assistant Cathy Wendt has enjoyed the changes. "The walking and running paths, play structures, and amphitheater have been great improvements and only enhance campus opportunities," she explains.

As part of the International Baccalaureate Diploma Program, candidate students research and write an extended essay. In her paper focused on the importance of outdoor learning, Emma Kooij '19 explored the role exposure to nature plays in children's mental health and cognitive development. In writing her essay, she encountered research suggesting that students who feel a connection to the natural world feel a responsibility to protect and maintain it. (See "Learning, Naturally" this page).

To foster this responsibility, Mr. Eaton encouraged his students to look more closely at the Yahara Watershed. "In response to the flooding this past year, the students

Learning, Naturally

How does interacting with the natural world enhance student learning?



Emma Kooij '19

Inspired by her love of the outdoors and the idyllic setting of the MCDS campus, recent MCDS graduate Emma Kooij investigated this question for her IB diploma extended essay. Emma, now studying psychology and Spanish at the University of Wisconsin-La Crosse, points out in her paper that exposure to nature improves students' mental health and thus impacts learning. "Nature links mental health and cognitive health together and improves their progress," she concludes. Here are some of the connections between time spent in nature and improved learning that Emma explored in her research:

- Students say exposure to the outdoors helps **relieve stress**.¹ Time spent outside correlates with **better mental health** and lower risk of depression and anxiety in children.²
- Green spaces **improve student concentration** by letting children slow down and focus their play.³
- Outside play provides students an opportunity for **self-directed play**, which leads to better executive functioning, mental understanding, and self-control.⁴
- Children with access to natural, green environments are **three times as likely** as other children to be active.⁵
- Students who spend time outdoors are more interested in taking care of the natural world. They become **good stewards of the environment**.⁶

¹ S. Nedovic and A. Morrissey, "Calm, Active, and Focused: Children's Responses to an Organic Outdoor Learning Environment"

² J. Mass et al., "Morbidity Is Related to a Green Living Environment"

³ S. Nedovic and A. Morrissey, "Calm, Active, and Focused: Children's Responses to an Organic Outdoor Learning Environment"

⁴ J. Barker et al., "Less-structured Time in Children's Daily Lives Predicts Self-Directed Executive Functioning"

⁵ N. Wells et al., "Environment, Design, and Obesity: Opportunities for Interdisciplinary Collaborative Research"

⁶ S. Otto and P. Pensini, "Nature-based Environmental Education of Children: Environmental Knowledge and Connectedness to Nature, Together, Are Related to Ecological Behaviour"



Sandhill cranes are a common sight on the campus of MCDS. Several mated pairs have returned to the area year after year.

“Connecting the kids to the land creates a subtle shift in their understanding of how everything is related. It allows them to see themselves as a part of something bigger . . . that they are part of an ecosystem.”

—Sarah Kendrick

studied the changes in our local hydrology that have occurred in the past century. We connected our learning to the local area by studying local geographic information systems (GIS) databases and by taking a field trip to clean up a park that had been affected by the flooding.” Mr. Eaton adds that it’s not just about science: “We strive to teach about not only what is necessary but what is meaningful.”

Ms. Kendrick is busy planning for future activities with her students in order for them to grow their respect for the environment. “I am going to set up more long-term research on our campus. We collected our first data on the lake last year as a trial. I am hoping we can continue to collect data on the health of the lake,” she notes.

Ms. Kendrick noted that with younger students, building connections and fostering stewardship is a process that takes time. “Connecting the kids to the land creates a subtle shift in their understanding of how everything is related. It allows them to see themselves as a part of something bigger . . . that they are part of an ecosystem,” she says. “I want to build an understanding of this relationship and have them understand their role in it. That’s my goal as a teacher.”

“The MCDS campus inspires learning in so many and varied ways,” comments Ms. Davis. “The opportunities for lifelong learning, whether they be in science, art, humanities, or character education, are all enhanced by our setting. We are truly fortunate.”

Native flowers thrive after community efforts to remove invasive species from the woods around campus allowed for more light to reach smaller plants.



Eleventh-grade IB biology students take water samples from Lake Cherokee in order to identify microscopic life and other elements present in the water.



Sloane '30 works in pencil to create a close-up observational drawing in the prairie as Ms. Gustafson looks on.

A Happy Accident:

How MCDS Found Its Home on Cherokee Marsh



An artist rendering of the original Yahara Center shows the building prior to the middle and high school additions.



Parents, teachers, and students construct the first MCDS garden near the upper parking lot.



Early students at MCDS enjoy sailing lessons on Lake Cherokee. In the background, the building can be seen with a second-floor balcony that extended from the lower school lobby.



Lower school students are eager to cut the ribbon after extensive renovations at 5606 River Road, formerly the Yahara Center. Fall, 1998.

Years before Madison Country Day School officially opened, Madison businessman Sam Jacobsen donated 40 acres near Oncken Road in the Town of Westport to the school. The gift was made to the MCDS founders on one condition: that they construct a school on the property. As designs for the new school were drafted by Robert A. M. Stern Architects, the founders hit a snag. According to Eric McLeod, a member of the MCDS founding board of trustees and former board chair, the school needed Dane County to grant a conditional use permit so MCDS could build a school on the agriculturally-zoned land. This seemingly small snag turned into a major delay for the project. As MCDS's targeted first school year approached, the founders searched for a temporary location for the school while the permanent location was planned and constructed.

The founders secured a short-term home for the school at a church in Martinsville, Wisconsin. As the struggle with county permitting continued, the temporary location allowed the school to open as scheduled in the fall of 1997. However, the commute to the Martinsville campus became increasingly arduous for families during that first semester. The board found a second temporary location for the school in an office building on Odana Road in Madison. The school founders hoped that the donated property would soon be permitted and construction could finally begin. As the parents of the initial class of 22 MCDS students waited, the struggle to build in time for the following fall went on.

Eventually, the group happened upon the Yahara Center property located on River Road and owned by the Adult Christian Education Foundation. The property was soon to be sold. The Yahara Center building consisted of what is today the lower school lobby, wings, music room, and pod. The land parcel included all the acreage between River Road and the shore of Cherokee Lake—also known as the Cherokee Marsh—but very little land to the north. The MCDS founders seized on the opportunity to purchase the Yahara Center and were able to renovate the property and open in time for the start of the 1998-1999 school year.

"Like many things in life, you often stumble on the good things accidentally. While we were so focused on getting approval to use the donated land, the Yahara Center—a much better site—became available," states Eric McLeod.

A year later, then Dane County Supervisor Kathleen Falk approached the school to work a deal to purchase the land directly adjacent to the Cherokee Marsh. Knowing the school would soon need space to expand, the MCDS board of trustees was able to secure a deal to trade some of the school's parcel for more land to the north. The resulting transaction allowed MCDS to build the first middle/high school building, soccer fields, and track and field area. While MCDS has retained ownership of the land that allows direct access to Cherokee Lake, much of the space students use and enjoy exists on county-owned and environmentally protected land.