



2024-2025 Virginia Watershed Educational Programs Project Loudoun County Public Schools

Summary:

Over the course of SY2024-2025, eleven Loudoun County Public Schools (LCPS) educators from multiple schools collaborated to design and develop a connected series of MWEEs for K-3 students. Kits of durable materials and supplies were also designed to accompany each MWEE and support implementation by LCPS educators. The MWEEs that were created align with Virginia DOE science standards and SEPs for each grade level and offer opportunities for vertical alignment as well as integration with other grade-level content areas. The MWEEs were tested in the classrooms of those educators who co-produced them as a means of evaluating and refining design, content and implementation guidance. The curriculum designers also offered recommendations for professional development they believed would be necessary to build educator capacity for MWEE implementation. The experience of successfully creating MWEEs for grades K-3 - and related educator supports - is informing the division's Environmental Literacy and Sustainability planning efforts and helping to build overall LCPS capacity to contribute to achievement of the Environmental Literacy Goal and related Outcomes of the Chesapeake Bay Watershed Agreement (CBWA). The curriculum cohort experience supported by this grant was co-facilitated by the LPCS Office of Sustainability and the LCPS Science Division.

The Process

MWEEs were designed via a year-long curriculum development process that mobilized **11 educators** from **8 LCPS Schools**. Participants were selected via an application process; the [opportunity](#) was advertised through multiple channels within LCPS. Selected educators and their school/grade level affiliations are listed below.

Not all cohort participants were classroom teachers in grades K-3. Nearly half were elementary education specialists (i.e. English Language teachers) and classroom educators currently teaching other grades. All cohort educators shared a common passion for hands-on learning and a desire to nurture nature- and place-connectedness through outdoor exploration and learning. Cohort participants had varying familiarity with MWEEs - only one educator confirmed a pre-existing awareness of MWEE components and rationale. One educator shared: *"I used to play outside so much when I was a kid. Not anymore. My students don't play outside. My own kids don't play outside. I'm here because I know that we need to change that - even if it challenges my comfort zone."*

The MWEE Curriculum Cohort came together in a total of **6 gatherings** over the course of SY2024-2025 - one virtual kickoff meeting and 5 in-person gatherings. The purpose and design of each gathering was thoughtfully crafted to achieve incremental progress towards project goals while also generating shared understanding and collective mission; building upon previous gatherings' accomplishments; and honoring and celebrating the educators as curriculum designers, instructional leaders and MWEE ambassadors. Iterative gut-checks and dedicated time for reflection, which were built into every gathering, supported sustained and cohesive effort as well as fellowship amongst cohort participants. Each in-person gathering was held off site at a local partner organization. This prevented school-day distractions, allowing educators to focus on the tasks at hand; it also exposed cohort participants to the work of each selected community partner, inspiring ideas for collaboration and the inclusion of additional subject matter expertise in lesson development.

Achievement of Project Objectives

The MWEE Curriculum Cohort achieved all four objectives that were articulated in the project proposal:

1. Objective 1. Create a series of Meaningful Watershed Educational Experiences (MWEEs) for elementary age students in grades K-3

All MWEEs are still in **draft** form.¹ LCPS is currently redesigning all curriculum to align with the new LCPS Instructional Framework and transitioning to a new curriculum management system. All four MWEEs are complete, but their presentation and formatting differs slightly from one grade level to the next. Over the course of Summer/Fall 2025, the lessons will be reformatted to align with new curriculum design guidelines. The lessons will be ready for distribution by the first MWEE Professional Development workshop, expected in mid-fall. Links to all draft MWEEs are clickable via the thumbnail images below. The specific VA Standards of Learning addressed in each MWEE are named in the lesson plans. Links to external resources and materials used during lesson facilitation as well as resources created specifically for the lesson (e.g., data collection sheets, graphic organizers, etc.) are also embedded in the plans. Vertical alignment between the different MWEEs is evident, and opportunities for integration and application of knowledge across content areas are intentional and plentiful!

2. Objective 2. Create kits to support K-3 MWEE implementation (durable materials & supplies)

Curriculum designers indicated that DCR support for the MWEE kits - i.e., kits of durable materials and supplies that support implementation of the lessons - was invaluable, not only for implementation itself but also in terms of design. Educators were not limited to lessons that used only materials that were already available in schools, or that they could get grant funding to purchase or that they would need to be purchased out of their own personal funds. The opportunity and flexibility to design kits to accompany the lessons themselves seemed to enhance creativity and innovation! All but one grade level team made modifications to their kits after test implementation in their schools - further underscoring the thoughtful attention to detail that went into ensuring usefulness and usability.



3. Objective 3. Test, evaluate and refine the newly created MWEEs via mobilization in select classrooms across LCPS

For those curriculum designers that helped create lessons for grade levels different from those that they teach, they trained other educators in their schools to test the MWEEs. Recommended edits will be integrated into the lessons during Summer/Fall 2025 as lessons are finalized and formatted to fit the new LCPS curriculum template and system.

4. Objective 4. Produce a professional development plan that identifies the priority learning opportunities necessary to build LCPS educator capacity for MWEE implementation.

As the cohort progressed through SY2024-2025, we were keeping notes and ideas for the professional development we knew would anchor roll out of the MWEEs into grades K-3 across the school division. PD was anticipated to begin in Fall 2025, with planning during the summer months (after completion of the MWEEs and kits). As the cohort came to a close, we knew our curriculum designers would also have thoughtful guidance for that PD. When we asked them to think about the most helpful training that could be offered to other K-3 teachers to encourage use of the MWEEs, we fully expected the educators to focus on a particular component of the MWEE (like the outdoor field experience) or maybe common needs like group/classroom management or assessment ideas. Instead, cohort members emphasized two different suggestions:

1. Start by building general, shared understanding of what a MWEE is and why it is powerful. *“Train them like you trained us!”* Understanding the “what” and the “why” behind each of the essential and supporting practices is important foundational knowledge.
2. Getting teachers’ buy-in is the next, most critical step. We need to get them to attend training and then convince them to implement the lesson in their schools.

Final Reflections

At the conclusion of each cohort gathering, we asked all participants to participate in a final reflection. A poster was placed at the front of the room with only this statement: “A MWEE is...”

Each participant was asked to complete the sentence. The same question and exercise was completed at the end of each gathering. From the first time to the last, the responses illustrated cohort participants’ changing understanding and appreciation of the MWEE as a powerful tool for student learning, leadership and voice. We hope you are encouraged and inspired by the thoughtfulness and transformation captured in the images. Thank you for your generous support of this work.

A MWEE is...

authentic

action, relevant

problem based

opportunity for all

collaboration

Problem-driven (solution-driven)

Outdoor inclusive

I am connected to this world ♥

Student Centered experience that connects lived experiences with the natural world.

A MWEE is...

makes you wonder

Student centered learning
"license to do what's right for kids"

Thought-provoking

hands on

powerful

a path to creativity
a personal connection to the world

Unique opportunity to learn

problem solving

An opportunity for all students to shine

A MWEE is...

Thought-provoking

problem Solving and hands on activities that get you outside

a student-driven experience

Outdoor experience that engages students in hands on learning & problem solving & thinking

teaching kids in an engaging way to use their voices!

How Learning should take place

engaging for students and teachers!

A MWEE is...

Student-centered learning that gets students outside, engaged in problem solving, and thinking

Engaging Student-Centered

Fun, engaging and inclusive

Connecting the students to their environment, giving them a chance to learn and enjoy

Think & Problem Solving that engages the students in a fun, hands-on, and thought-provoking activity that gets them outside