



**Chesapeake Bay Program**  
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# An Educator's Guide TO THE Meaningful Watershed Educational Experience (MWEE)

June 2019

# MWEE

# How to Use This Guide

This guide has been designed for users with varying levels of familiarity with the meaningful watershed educational experience—the MWEE. While most information contained in the guide is relevant regardless of your experience with the MWEE, the following tips may help you find the information most useful to you.

**Getting Started:** If you are not sure what a MWEE is or why you would want to do one with your students, start at the beginning. “Recognizing the MWEE as a Powerful Educational Tool” and “Understanding the MWEE” sections address the important topics of what a MWEE is and why MWEEs are a valuable teaching approach. The rest of the guide walks you through planning, implementing, and sustaining a MWEE.

**Planning a MWEE:** If you are already familiar with the MWEE and want to design one to use with your students, start with “Designing and Implementing a MWEE,” which guides you through brainstorming MWEE ideas, creating a solid plan that connects a MWEE to the curriculum, and auditing a MWEE or other outdoor program to see if it meets the MWEE definition.

**Evaluating a MWEE:** If you have an existing MWEE and want to strengthen it, start with the “Evaluate” section under “Designing and Implementing a MWEE” which will help you identify opportunities to build on the experience and assess its success.

**Keeping it Going:** If you are looking for information on sustaining a MWEE that you are already doing, see “Supporting a MWEE Project” for guidance on communicating MWEE successes and securing funding.



A student from Eastport Elementary School in Annapolis, Maryland, plants native wetlands at Truxton Park.

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**Look for these symbols to guide you** to additional resources that can help plan and implement a MWEE. The **Toolbox Icon** indicates that there is an associated

tool in the back of this guide. The **Backpack Icon** indicates that there are associated resources on BayBackpack.com.

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## Authors:

Shannon Sprague, NOAA

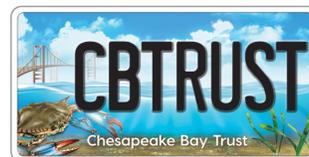
Amy Green, Chesapeake Bay Foundation

Tara Drennan, Chesapeake Bay Trust

Kevin Schabow, NOAA

Erin O'Neal, Environmental Literacy Works

Andrew Pizzala, Chesapeake Research Consortium



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# Recognizing the MWEE as a Powerful Educational Tool

The 2014 Chesapeake Bay Watershed Agreement includes an Environmental Literacy Goal that commits states in the region to prepare every student with the knowledge and skills necessary to responsibly protect and restore their local watershed. The cornerstone of this goal is providing teacher-supported meaningful watershed educational experiences—MWEEs— in elementary, middle, and high school. Each state or local education agency is responsible for establishing locally relevant approaches to environmental literacy that include MWEEs. Many districts are working to incorporate these experiences into the curriculum to set the expectation that they are provided for all students in a grade or a course. This is often referred to as systemic implementation. Though the Watershed Agreement applies only to school districts in the watershed, states are encouraged to support these opportunities for all students in their jurisdiction.

MWEEs support high-quality teaching and learning by actively engaging students in building knowledge and meaning through hands-on experiences. In these experiences, the core ideas and practices of multiple disciplines are applied to make sense of the relationships between the natural world and society. The MWEE definition has been designed to support state science and social studies standards and align with standards-based initiatives, including STEM education; the Common Core State Standards; Next Generation Science Standards; and



Middle school students from Allegany County, Maryland Public Schools investigate the biological health of Evitts Creek.

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***“This Guide will definitely help me as an educator*** as I move forward implementing a broader, more enduring, and sustainable program within our school.”

***—Sonia Saunders, Brandywine Springs School, Wilmington, Delaware***

the College, Career, and Civic Life (C3) Framework for Social Studies. The MWEE definition also reflects research-based instructional models, including place-based education, the NAAEE Guidelines for Excellence, and Investigating and Evaluating Environmental Issues and Actions (IEEIA).

### ***MWEEs Increase Student Engagement and Enthusiasm***

***for Learning.*** By allowing students to lead their own research about local issues they are interested in that affect their schools, neighborhoods, and communities, MWEEs reach beyond textbooks and connect more authentically to the lives of students. Conducting hands-on, outdoor investigations and meaningful action projects related to real-world issues fully engages students as active learners.

***MWEEs Support Student Achievement.*** MWEEs provide the opportunity for students to engage in problem-solving situations that place learning in the context of their daily lives. When this sort of life-relevant, student-centered learning is integrated into the curriculum or used to connect and organize themes across the curriculum, students are better equipped to meet academic standards.

***MWEEs Advance 21st Century Skills.*** MWEEs ask students to think critically, solve problems, employ analytical skills and higher-order thinking, and communicate effectively. These skills are essential to prepare a workforce ready for the innovation and challenges of the 21st century. In addition, today's economy offers tremendous opportunities for careers directly related to the environment. MWEEs can help prepare students for these jobs.

***MWEEs Promote Environmental Stewardship and Civic Responsibility.*** A student's years in school provide a unique opportunity to build the knowledge, skills, and motivation to make informed decisions regarding complex and evolving environmental issues. MWEEs prepare students for this civic responsibility by having them examine local issues and take action to help their community.

***“There is a mountain of evidence that suggests environmental education is a powerful way to teach students.*** Over 100 studies found that it provides transformative learning opportunities. There is no doubt that environmental education is one of the most effective ways to instill a passion for learning among students.”

***—Dr. Nicole Ardoin, Stanford University Graduate School of Education and Woods Institute for the Environment***

Key findings of her research include:

- » 98% of studies that examined whether students gained knowledge from environmental education saw a positive impact,
- » 90% reported increased skills, and
- » 83% reported enhanced environment related behaviors.

A summary can be found at [bit.ly/eeworks](https://bit.ly/eeworks).

# Understanding the MWEE

MWEEs are learner-centered experiences that focus on investigations into local environmental issues that lead to informed action and civic engagement. Both teachers and students play important roles in the MWEE by working together in partnership. Teachers present unbiased information and assist students with their research and exploration, while students go through the inquiry process and ultimately take action to address the issue. Four essential elements and four supporting practices build upon each other to create this comprehensive learning experience for students.



## MWEE Essential Elements

The MWEE consists of four essential elements that describe “what students do.” These elements promote a learner-centered approach that emphasizes the role of the student in actively constructing meaning from the learning experiences. Throughout the process students have time for reflection, allowing them to refocus on how what they are learning and experiencing affects the driving question of their investigations.

Students in Baltimore City model polluted runoff with the Living Classrooms Foundation.

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***“Part of the beauty of MWEEs is that they are not something extra*** but are, indeed, a means of enriching lessons for deeper student learning while strengthening local and national academic standards.”

***—Donna Balado, Maryland State Department of Education***

## Issue Definition

Students focus on a driving question that addresses a locally relevant environmental issue, problem, or phenomenon requiring background research and investigation. Driving questions—often referred to as essential questions, organizing questions, or overarching questions—are the “big picture” questions that are important for sparking curiosity and organizing inquiry for the issue investigation. Posed by the teacher, driving questions provide students with a framework for learning across disciplines. Students learn more about the issue through classroom instruction and by making observations, collecting data, conducting experiments, talking to experts, and reviewing credible publications. Supporting questions are generated by the students to help find the missing information needed to answer the driving question. During Issue Definition, students also reflect on personal and public values and perspectives related to the issue.

## Outdoor Field Experiences

Students participate in one or more outdoor field experiences sufficient to investigate the issue, problem, or phenomenon. These investigations may involve making observations, collecting data, and/or conducting other activities required for answering their questions and informing student actions.

To the extent possible and within appropriate safety guidelines, students are actively involved in planning the inquiry that occurs during the outdoor field experience(s). Field study sites can be located on school grounds or at locations close to school such as streams or city parks. They can also take place at offsite locations like state parks, wildlife refuges, or education centers that are equipped with experts, gear, and facilities. A range of individuals, including teachers, environmental educators, natural resource professionals, or trained volunteers, can help facilitate field experiences.

## Synthesis and Conclusions

Students identify, synthesize, and apply evidence from their investigations to draw conclusions and make claims about the issue, problem, or phenomenon. They convey data and information about their investigations, conclusions, and claims to audiences ranging from classrooms to the larger public community. The focus in this stage is on explaining their investigation rather than inspiring action.

## Criteria for Effective Driving Questions

- » Supports learning objectives
- » Helps initiate and focus the inquiry
- » Relevant and related to everyday life
- » Provides opportunities for stewardship and civic action
- » Thought-provoking and intellectually engaging
- » Open-ended (i.e., typically will not have a single, final, and correct answer)
- » Promotes further inquiry (i.e., raises additional questions)
- » Encompasses both natural and social systems and topics
- » Requires students to revisit the problem frequently as knowledge and understanding evolve
- » Calls for higher-order thinking, including analysis, inference, prediction, and evaluation



We all live in a watershed. The **Planning Toolbox** includes a map and description of the **Chesapeake Bay Watershed** (page 17).

## Stewardship and Civic Action

Once students have generated a claim, they should work in small groups or as a class to brainstorm and evaluate solutions, and then take action! Throughout this process, teachers play an important facilitation role by forming groups, moderating, and answering questions, while students drive the decisionmaking, planning, and implementation in an age-appropriate way. Action projects may include stewardship, civic action, or a combination of both. Students reflect on the action and determine the extent to which the action successfully addressed the problem, challenge, or opportunity reflected in the claim. Students may also share proposals for sustaining or extending the action.

## MWEE Supporting Practices

The MWEE also includes four supporting practices that describe “what teachers do” to ensure success.

### Active Teacher Support

MWEEs depend on teacher facilitation and ongoing support of student learning. Teachers ensure that the essential elements of the MWEE come together to support academic goals for learning while creating opportunities for students to take active roles in their learning. Even when environmental educators or other professionals are leading elements of the MWEE, the teacher should be actively engaged in answering questions and relating the experience to the larger MWEE.

### Classroom Integration

MWEEs are anchored to curriculum standards and support formal goals for learning and student achievement. They provide authentic, engaging opportunities for interdisciplinary learning that crosses traditional boundaries between disciplines.

## Incorporating Youth Voice into the MWEE

Encouraging youth voice during a MWEE is important for fostering a lasting environmental stewardship ethic in students. Giving students the opportunity to make decisions throughout the MWEE helps them to foster a belief in their own abilities, realize that their voices matter in the community, and apply innovation and creativity to tackle real issues. Here are some ideas to work youth voice into each of the essential elements.

### *Issue Definition*

» Have students generate or add to supporting questions to help answer the driving question and shape investigations.

### *Outdoor Field Experiences*

» Have students design their own inquiries and experiments to conduct during the outdoor experiences.

### *Synthesis and Conclusions*

» Give students the opportunity to share and debate their conclusions with their peers.

### *Stewardship and Civic Action*

» Encourage students to design and present their own project ideas to address their problem, issue, or phenomenon.

» Provide opportunities for students to present their findings to a meaningful audience such as local or state decision makers.

### *Other things to consider*

» Ask questions of the students rather than provide answers.

» Create a safe space where everyone is comfortable being heard, including using techniques to encourage introverted youth to have their voices heard.

» Set up a speaking and decision-making system. Often democratic or consensus practices work well.

» Consider multiple perspectives.

Some portions of the experience, such as the outdoor field experiences, may occur off school grounds and/or be facilitated in partnership with external providers, however, the MWEE is integrated into the scope and sequence of the academic program.

## Local Context

MWEEs occur within a local context (i.e. schoolyard, neighborhood, town, or community) in order to establish the life-relevancy of the issue, problem, or phenomenon being studied. Situating the MWEE within local contexts enables students and teachers to explore how individual and collective decisions affect their immediate surroundings and how their immediate surroundings affect the larger environment.

## Sustained Activity

MWEEs represent sustained activity that engages students from beginning to end. Though a field experience may occur on one day, the total duration leading up to and following the experience involves a variety of rich learning opportunities spread over the course of a unit or multiple units.



Elementary school students study macroinvertebrates at Delaware Nature Society's Flint Woods Preserve.

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Experiences such as tours, gallery visits, simulations, demonstrations, or nature walks may be instructionally useful, but alone do not constitute a MWEE.

## Types of Action Projects

- » **Watershed Restoration or Protection** (e.g., create schoolyard habitat, planting trees or grasses, invasive species removal, community cleanup, stormwater management)
- » **Everyday Choices** (e.g., reduce/reuse/recycle/upcycle, composting, energy conservation, water conservation)
- » **Civic Engagement** (e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change)
- » **Community Engagement** (e.g., presentations, social media, event-organizing, messaging at community events/fairs/festivals, mentoring, PSAs, flyers, posters)

# Designing and Implementing a MWEE

This section will highlight how to begin designing a MWEE. The way that MWEEs are designed and implemented may change over time as an educator gains experience and personal insights, but this section provides some basic tools to help think, plan, and evaluate a MWEE.

**Think:** This section walks through some big-picture questions that are important to keep in mind as a backdrop to planning.

**Plan:** This section introduces the Environmental Literacy Model (ELM), which helps develop a plan for a MWEE and situate it into the existing curricular program.

**Evaluate:** This section offers an opportunity to review the planned program against the MWEE definition and reflect on the process. It also introduces resources that can help formally evaluate an environmental education program.



Students explore what critters live in a stream near their school in Harrisburg, Pennsylvania.

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## Think

MWEEs may be inspired by a learning objective that lends itself to field-based learning or by a compelling problem, issue, or challenge. They may also be built from existing field trips or use existing schoolyard or community assets.

***“Partnerships provide opportunities for teachers and students*** to experience the natural world beside those who live and breathe practical environmental literacy on a daily basis.”

***—Jonathan Wickert, Delaware Department of Natural Resources and Environmental Control***

During this phase, it may be worthwhile to consider existing district, community, or school-based initiatives for opportunities to integrate a MWEE. Exploring and gathering information on local environmental issues, options for field experiences, and existing teaching resources can also help generate ideas. There are likely opportunities for field experiences to occur on or near the schoolyard, for example at local parks, museums, or nearby fields or streams. Outdoor experiences are also available through environmental education providers.

Successful MWEEs often involve the support of multiple partners who play important roles in planning, delivering, and/or sustaining MWEE programs. Environmental education professionals from the school district or local nonprofit organizations can often assist with MWEE planning and implementation, including brainstorming MWEE ideas, offering teacher professional learning, and assisting with outdoor field experiences and/or action projects. District content specialists may also be able to provide access to information, materials, and resources. Additionally, community partners like businesses, universities, and government agencies can often be called on to support MWEEs by offering time, expertise, and supplies. Remember that while these are wonderful resources, active teacher participation in all elements of the MWEE is required.

The following questions can help facilitate brainstorming and planning:

- » What are the overall goals and/or objectives for learning?
- » What are the local issues, problems, or phenomena to explore?
- » What environment-related field trips, outdoor assets, or other resources exist at my school or site?
- » Who can I work with on this project?
- » What else do I need to consider?



The Chesapeake Bay Program maintains a suite of resources that can help you begin to explore options for your MWEE.

**Bay Backpack** is an online resource for educators that houses lesson plans, information on field experience providers, and a detailed guide for using schoolyards for outdoor education at [baybackpack.com](http://baybackpack.com).

National Park Service maintains a **map of public access sites** in the Chesapeake Bay at [findyourchesapeake.com](http://findyourchesapeake.com).

The **Chesapeake Bay Program website** has interesting and up-to-date information about the Bay, its issues, and the effort to protect and restore this national treasure at [chesapeakebay.net](http://chesapeakebay.net).



The **MWEE Think Cloud** (page 18) in the **Planning Toolbox** will help you organize your thoughts for this initial THINK phase. Even if you are an experienced MWEE practitioner, you can use this tool to brainstorm new opportunities and stronger connections.

**“My greatest success was student engagement.** Students who have not been particularly interested in science this year were drawn in by the real-world application of this project.”

—**Scott Hartmen, Hamilton Elementary/Middle School, Baltimore, Maryland**

## MWEEs provide a rich platform for cross-curricular understanding and study.

Consider possibilities for involving other teachers and content areas in your MWEE. For example:

- » **Science and Engineering:** In what ways can students engage in authentic scientific and engineering practices in the service of making sense of natural phenomena?
- » **Social Studies/Geography:** How will students investigate the history of the land and people who live there? How is the geography of the area connected to environmental issues? How is the public involved in the issue or question of your MWEE?
- » **Math:** Can students explore how math supports their claims or use it to strengthen their claims? Can math be used to enhance school ground investigations? What data can be collected and/or organized during your MWEE?
- » **Reading:** Will students interact with various texts: sets of directions, nonfiction books, brochures, websites, and literature? What has been written before about environmental problems in your local community and/or the issue you are exploring through your MWEE?
- » **Writing:** How will students synthesize ideas in writing and write for authentic audiences as part of the MWEE?
- » **Art:** What opportunities are there for students to create illustrations to enhance written work or the MWEE?
- » **Music:** Can students create, perform, or learn through music connected to their investigations? Has music been created or inspired about the issue, problem, or phenomenon of your MWEE?
- » **Technology:** How can students explore and better understand our abilities to modify the natural world to meet human needs and wants?



Wilderness Leadership & Learning (WILL) students in Washington, D.C., participate in a field experience at the Chesapeake Bay Foundation as part of their ongoing investigation into water quality.

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## ENVIRONMENTAL LITERACY MODEL **ELM**

				
<b>MWEE Essential Elements</b>	Issue Definition	✓	✓	
	Outdoor Field Experiences		✓	✓
	Synthesis and Conclusions		✓	✓
	Action Projects			✓
<b>MWEE Supporting Practices</b>	Active Teacher Support	✓	✓	✓
	Classroom Integration	✓	✓	✓
	Local Context	✓	✓	✓
	Sustained Activity	✓	✓	✓

### Plan

The Environmental Literacy Model (ELM) Planning Document helps educators think through the details of a MWEE. ELM is designed to help situate the MWEE within the scope and sequence of the curriculum, and to assist in communicating to school leadership, the local community, and colleagues. ELM features three primary components—Curriculum Anchor, Issue Investigation, and Civic Engagement—that are directly aligned with the MWEE essential elements and supporting practices.

The **Curriculum Anchor** identifies connections of the MWEE to academic standards and establishes life-relevant, local contexts for learning. By defining the learning objectives and driving question within the local context, it addresses the MWEE essential element of **Issue Definition** and the supporting practices of **Classroom Integration** and **Local Context**.

**Issue Investigation** provides the opportunity for students to construct knowledge and understanding through multiple field-based investigations of a life-relevant issue, problem, or phenomenon. Some of



The **ELM Planning Document** in the **Planning Toolbox** will help you plan your MWEE with an emphasis on better integrating the issue investigation and culminating action with your academic curricular program. ELM was created by the Chesapeake Bay Foundation as part of the Maryland Environmental Literacy Partnership. A MWEE-specific version was created for this guide and can be found in the Planning Toolbox. For more information about ELM, visit [bit.ly/elitmodel](http://bit.ly/elitmodel).

These additional resources in the Planning Toolbox may also help to organize information as you work through the components of the ELM Planning Document:

- » **Developing Driving and Supporting Questions** (page 19)
- » **Incorporating Outdoor Field Experiences** (page 20)
- » **Moving from Claims to Informed Action** (page 21)

these investigations should take place outdoors. In working together throughout the investigation to construct, communicate, and refine explanations about the driving question, students participate in the MWEE essential elements of **Outdoor Field Experiences** and **Synthesis and Conclusions**.

**Stewardship and Civic Action** empower students to adapt and apply the knowledge they have constructed through investigation. As students develop a claim, identify solutions, design plans, and take informed action, they again address the MWEE essential element of **Synthesis and Conclusions**, and also fulfill the essential element requirement for **Action Projects**.

By doing the full suite of activities outlined in the ELM Planning Document, the supporting strategies of **Active Teacher Support** and **Sustained Activity** from the MWEE are also fulfilled.

## Evaluate

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Evaluating a MWEE can improve its long-term success and inform future projects and experiences. The first step is to make sure the plan meets all the criteria of the MWEE definition, including the essential elements of **Issue Definition**, **Outdoor Field Experiences**, **Action Projects**, and **Synthesis and Conclusions** along with the supporting practices of **Active Teacher Support**, **Classroom Integration**, **Local Context**, and **Sustained Activity**.

Activities in a MWEE must be sustained and connected, providing students the ongoing opportunity to evaluate and communicate the results of their inquiry. Review lesson plans to ensure they provide space and structure for these important outcomes. Look for areas that may need support through community involvement and start reaching out to people before beginning the MWEE.

In addition to classroom learning assessments, tracking outcomes related to student watershed literacy, environmental stewardship, and science learning may also be of interest to some educators implementing MWEEs. Information and questions that can be used to evaluate these outcomes as part of the MWEE can be found at [bit.ly/measuring-mwee](http://bit.ly/measuring-mwee).



The **Teaching Resources Collections** on **Bay Backpack** provide information, lesson plans, and classroom resources about the Bay and its watershed. Access this information at [baybackpack.com/collections](http://baybackpack.com/collections).



Use the **MWEE Audit** (page 26) in the **Planning Toolbox** to determine if your project meets the full definition of the MWEE. Even if you meet the minimum criteria, the tool can help identify areas that could be strengthened.

# Supporting a MWEE Project

## Building Awareness

Building broad awareness about a MWEE may strengthen community support and, ultimately, the long-term success of a MWEE. This can be beneficial at the school, district, and broader community levels as well. Actively engaging students in this process can be an interesting extension to the **Synthesis and Conclusions** element of a MWEE, and could be an **Action Project** if it aims to inspire behavior change.

At the school building level, it is important to celebrate success to garner additional resources and excitement for the project, and to build toward or reinforce a school culture that embraces outdoor education. Principals, other teachers, Parent Teacher Associations (PTA), building services staff, parents, and other students are all important partners. Getting them involved in and excited about the project can go a long way toward ensuring that a MWEE has the support to continue into the future. It is also important to recognize partners who lend their support. Schools often have a variety of built-in mechanisms for helping with this—from the school or PTA newsletter, website, or social media accounts to the morning announcements, bulletin boards, or events.

It is also useful to build support at the school district level. Districts can incorporate MWEEs into the curriculum and expectations for schools. This can create the space, permission, and sometimes even funding for schools and teachers to implement MWEEs. Partners at this level include superintendents, members of boards of education, and central office staff, such as curriculum and facilities managers, and staff. Invitations from schools to attend press events, community outreach events, or other celebrations are often met favorably by these partners. Students can deliver powerful testimonials at these events or at school board meetings.

The community surrounding a school is generally extremely interested in learning more about school initiatives, especially because many of the community members have children who are attending, will attend, or have attended the school. Reaching out to the community through the media, public service announcements, meetings of local government officials, and/or community outreach events can increase awareness and support of a MWEE. Presenting



Students immerse themselves in stewardship and civic action through oyster reef restoration.

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to local government officials about the findings of their MWEE is sometimes a logical and powerful culmination of the student **Action Project** element of the MWEE. Teachers, school administrators, or partners may also want to reach out to local television stations, newspapers, and online media services to invite them to witness a MWEE in action.

These are just some ideas for how to build awareness for a MWEE. There may be additional opportunities within the community.

## Securing Funding

Many MWEEs can be built around local sites (i.e. school grounds or nearby parks and streams) and/or existing resources (i.e. planned field trips or events, or materials and equipment in classrooms or storage facilities), so they may not require additional funding. For those MWEEs that incorporate new off-campus trips, specialized supplies, or other resources not currently available, additional funding may be required. Long-term project funding also needs to be considered. MWEEs take time and effort to develop, so building something sustainable makes sense.

The school and local community can be a great source for funding. Field trip fees can often be paid by parents, and when this is not possible, the school PTA can sometimes help defray the costs. Many PTAs have budgets for special projects and are often supportive of hands-on field experiences. They may also be able to help out with funding of supplies or equipment. Even if a PTA does not have the funding to support the MWEE, parents can have excellent ideas about how to reach out to the broader community. When looking to the broader community, neighborhood organizations, local nonprofits, and local businesses will often donate supplies, equipment, or time, and may offer easy-to-manage small grants with very little paperwork.

For larger or ongoing projects, teachers and principals are encouraged to look to school district budgets. Many school districts support the installation of schoolyard projects, support system-wide field experiences for students, or otherwise provide ongoing, reliable funding for components of the MWEE. And if a school happens to be planning construction, staff can sometimes work with facilities staff to incorporate green elements, including outdoor classrooms and other schoolyard projects that can be used by students for authentic research (i.e. that stormwater retention pond can be a great wildlife habitat if planned appropriately).



Many practitioners reach out to media at some point during their MWEE. Be sure to check with your school and/or school district to see if they have protocols in place to guide media outreach. See the **Planning Toolbox** for guidance on **Spotlighting Your MWEE** (page 35).



Information on writing grants as well as a list of available grant programs can be found at [baybackpack.com/funding](http://baybackpack.com/funding).

### **“Thousands of our 7th-grade students**

participate in a formal MWEE with our partners, George Mason University and the Fairfax County Park Authority. Students see first-hand how their everyday actions and decisions can make a difference when they plan and implement their stewardship projects.”

**—Elaine Tholen,  
Fairfax County Public  
Schools**

**“MWEE implementation with K-12 students is most effective** when the teachers, themselves, have experienced MWEEs during professional learning opportunities, often provided by local colleges & universities, resource agencies, and EE non-profits.”

—**Tamra L. Willis, Mary Baldwin University College of Education**



Teachers conduct a salamander survey as part of a week-long course on designing locally relevant field-based investigations.

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In addition to school and school district funding, there are many opportunities to secure funding from external sources, including grants from federal and state government, businesses and corporations, and private foundations. Some school districts have grants coordinators to assist in these efforts. Students may even be able to assist with grant writing as part of their MWEE to further develop their 21st century skills.

While grants are wonderful to help kick-start a project, they are not meant to provide long-term support. In fact, many grant makers ask for a sustainability plan as part of their application process. The information from the previous section on Building Awareness can also be used to put together a communications plan that generates the excitement and momentum that can lead to longer-term support for the MWEE.

## Conclusion

MWEEs are unique and compelling opportunities for students to explore local environmental issues through sustained, teacher-supported programming. The tools and information in this guide can help ensure that MWEEs are done thoroughly and thoughtfully to meet the needs of students, teachers, and the environment. Well-designed MWEEs enhance student engagement and enthusiasm for learning, academic achievement, 21st century skills, and environmental stewardship and civic responsibility. MWEEs are becoming an increasingly popular teaching approach throughout the Chesapeake Bay region and beyond. As more students participate in high-quality MWEEs throughout the region, we hope for an engaged and informed citizenry who actively participate in the protection and restoration of the Chesapeake and local watersheds. For more information, please contact the Chesapeake Bay Program Education Workgroup at [bit.ly/cbp-workgroup](http://bit.ly/cbp-workgroup).



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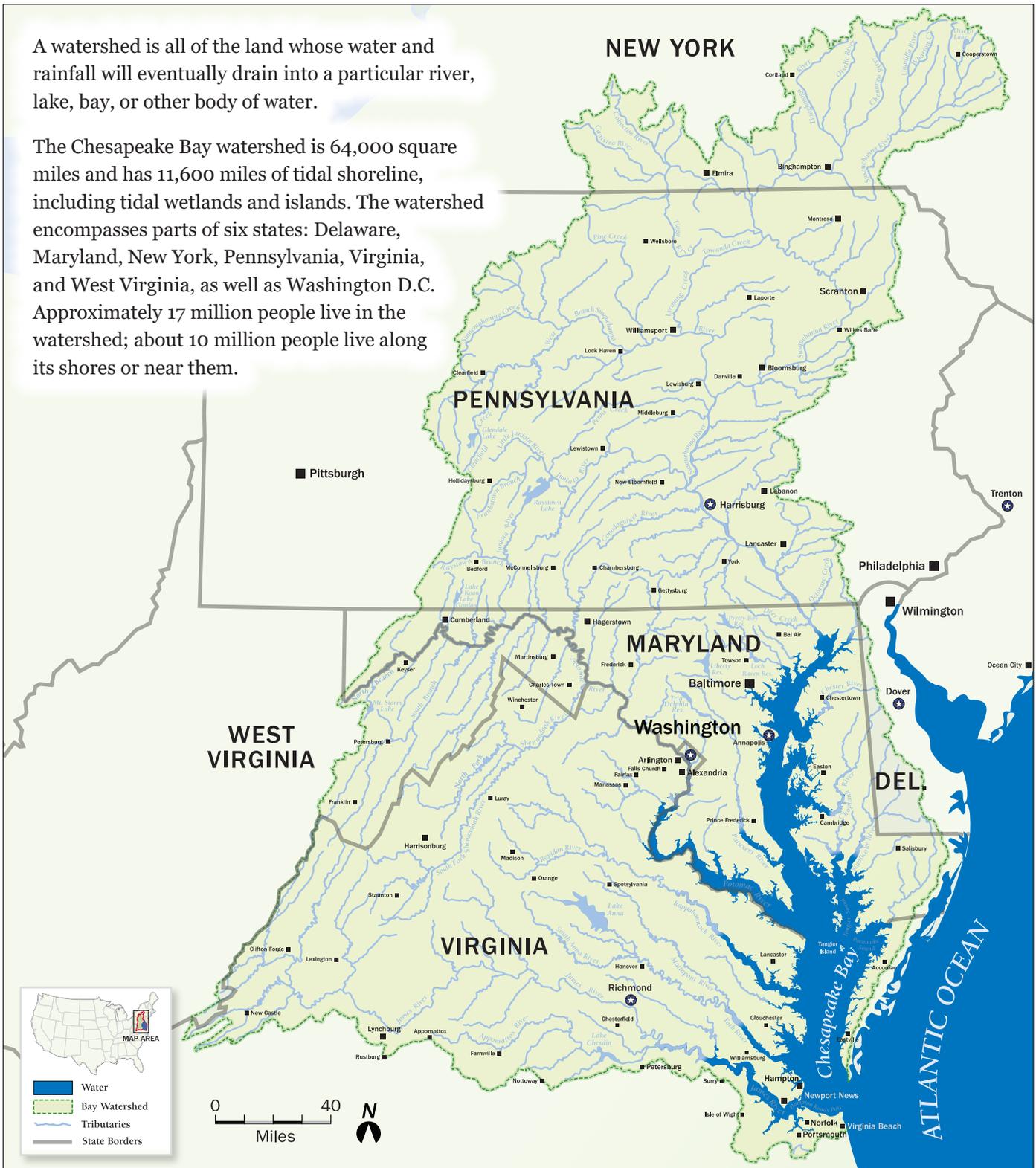
# Planning Toolbox

MWEE

# The Chesapeake Bay Watershed

A watershed is all of the land whose water and rainfall will eventually drain into a particular river, lake, bay, or other body of water.

The Chesapeake Bay watershed is 64,000 square miles and has 11,600 miles of tidal shoreline, including tidal wetlands and islands. The watershed encompasses parts of six states: Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia, as well as Washington D.C. Approximately 17 million people live in the watershed; about 10 million people live along its shores or near them.



# MWEE Think Cloud

Use this MWEE Think Cloud to do some initial brainstorming about MWEE ideas and to facilitate conversation about your MWEE plans with partners and team members. The questions in the clouds are meant to support your thinking and are open to your interpretation about how to be used in this space.



# Developing Driving and Supporting Questions

This tool will help connect the dots between the issue, problem, or phenomenon explored throughout the MWEE, the driving question, the supporting questions, and the standards. While the supporting questions are ideally created by your students, you'll likely have a good idea of what those could look like based on the investigations. For more information on creating effective driving questions, refer to the graphic on page 5.

MWEE Issue	Driving Question	Supporting Question	Standard(s)
		Supporting Question	Standard(s)

# Incorporating Outdoor Field Experiences

This tool can be used to evaluate potential sites for Outdoor Field Experiences, including exploring how these sites can support the Issue Definition and Stewardship and Civic Action essential elements.

How will the experiences be used to make observations, collect data, or otherwise help answer the driving/supporting questions?			
How can field experiences be used to explore or implement solutions as part of an action project?			
	Possible Site #1	Possible Site #2	Possible Site #3
Site location and description (school grounds, partner sites, local natural areas)			
What work do the field experiences do for your MWEE (learning objectives, science and engineering practices, etc.)?			
What will the teacher do to facilitate learning?			

<p>If partners are engaged, what is their role?</p>			
<b>Logistical Considerations</b>			
<p>What natural features, facilities, and/or programs are available at the site?</p>			
<p>Cost (transportation, program fees, etc.)</p>			
<p>What permissions need to be secured?</p>			

# Moving from Claims to Informed Action

This tool will help you visualize different action options for addressing the driving question explored in your MWEE. For information on different types of action projects, refer to the graphic on page 6.

Make Your Claim			
Conclusions from Investigations			
	Solution #1	Solution #2	Solution #3
What action could be taken to address the environmental problem, issue, or phenomenon? See <b>Types of Action Projects</b> on page 6.			
How would this help to address the environmental problem, issue, or phenomenon?			
What resources would you need?			



# Environmental Literacy Model

Title	
Author	
School, District	
Audience (grade, course)	

## Curriculum Anchor

### Defining the Learning Objectives and Curriculum Connection

Curriculum indicators, performance expectations, and/or student learning objectives.

### Describing the Local Context

The life-relevant issue that will serve as the context for learning.

### Identifying the Driving Question

A broad, open-ended, life-relevant question that is based on the standards/learning objectives. Guides inquiry for the investigation(s), prompts the development of actionable claims.

# Environmental Literacy Model

## Issue Investigation

### Asking Questions, Defining Issues and Problems

Students define the issue, problem, or phenomenon to be investigated and develop supporting questions that are relevant.

Issue Investigation 1	Issue Investigation 2	Issue Investigation 3

### Planning and Conducting Investigations

Students plan and conduct investigations and classroom activities (indoor and outdoor) that actively address students' supporting questions. Students collect data that will be used to inform actionable claims.

Issue Investigation 1	Issue Investigation 2	Issue Investigation 3

# Environmental Literacy Model

## Issue Investigation (con't.)

### Analyzing and Interpreting Data

Students analyze data through graphs, models, and other methods to reveal patterns and relationships. Students synthesize and apply evidence from their investigations to draw conclusions that address the supporting questions.

Issue Investigation 1	Issue Investigation 2	Issue Investigation 3

### Constructing and Communicating a Claim

Students draw on the conclusions from their investigations to make a claim about the driving question and communicate these evidence-based claims to internal and/or external audiences.

Issue Investigation 1	Issue Investigation 2	Issue Investigation 3

## Stewardship and Civic Action

### Identifying Solutions

Students identify and explore solutions that directly address the problem, challenge, or opportunity reflected in their claim. Students use decisionmaking processes to identify the solution(s) to implement.

### Designing a Plan and Taking Informed Action

Students design a plan for implementing solutions through informed action in their classrooms, schools, and/or communities. The plans should include criteria for determining the extent to which the action successfully addresses the problem, challenge, or opportunity reflected in the claim. Students implement their plans.

### Evaluating Action

Students reflect on the action and determine the extent to which it successfully addresses the problem, challenge, or opportunity reflected in the claim. Students communicate their findings and share proposals for sustaining or extending the action.

# Meaningful Watershed Educational Experience (MWEE) Audit

This tool is designed to help you and your team strengthen your planned or existing projects to meet the full definition of a MWEE including the essential elements (Issue Definition, Outdoor Field Experiences, Synthesis and Conclusions, Stewardship and Civic Action) and supporting practices (Classroom Integration, Active Teacher Support, Local Context, Sustained Activity).

Classroom Integration	Score
Evaluate the extent to which the MWEE is meaningfully integrated with the scope and sequence of the academic program and supports cross-disciplinary learning. Keep in mind that the MWEE is not meant to be something extra; rather, it is an educational approach that supports academic success and environmental stewardship.	
<b>The learning objectives to be met by the MWEE are clearly defined for each grade participating.</b> <i>(Score 0 if not present; Score 2 if present but unclear; Score 4 if present and clearly defined.)</i>	0 2 4
<b>The MWEE clearly and explicitly supports the identified academic standards.</b> <i>(Score 0 if standards are not identified; Score 3 if standards are identified but no evidence how MWEE addresses standards; Score 6 if standards are identified and some evidence how MWEE addresses standards; Score 9 if evidence that MWEE clearly and explicitly supports standards.)</i>	0 3 6 9
<b>The MWEE supports learning in multiple disciplines.</b> <i>(Score 0 if only in one discipline; Score 2 if in multiple disciplines.)</i>	0 2
<b>Subtotal</b>	___/15
<b>CRITERIA</b> <p><b>Less than or equal to 4:</b> Your project needs to have a clearer connection with academic standards and/or learning objectives to be a MWEE. Don't be discouraged, there are resources and tools to help!</p> <p><b>Between 5 and 10:</b> There are elements of classroom integration, but it could be stronger with either (1) better support of the academic standards and/or learning objectives you defined or (2) better connect with other academic standards and/or learning objectives that may be more appropriately met through the MWEE. Review the sections where you did not score highly and see what you might be able to do to earn more points.</p> <p><b>Greater than or equal to 11:</b> Congratulations! There are always areas for improvement, but your project strongly supports academic standards and learning objectives.</p> <p><b>For help, check out the “Curriculum Anchor” section of the Environmental Literacy Model (ELM) in <i>An Educator’s Guide to the MWEE</i>.</b></p>	
<b>IDEAS TO STRENGTHEN CLASSROOM INTEGRATION</b>	

Issue Definition	Score
<p>Evaluate the extent to which the MWEE supports student learning about a locally relevant environmental issue, problem, or phenomenon that the students can address through stewardship and civic action. Driving and supporting questions anchor learning about the issue, which is explored through classroom instruction, background research, reflection on values and perspectives, and investigation.</p>	
<p><b>The investigation of the chosen issue, problem, or phenomenon will logically culminate in stewardship and civic action.</b></p> <p><i>(Score 0 if the answer is no or probably not; Score 2 if the answer is not sure; Score 4 if the answer is very likely or yes.)</i></p>	0 2 4
<p><b>The driving question has the following characteristics (check all that apply):</b></p> <ul style="list-style-type: none"> <li>Supports learning objectives</li> <li>Helps initiate and focus the inquiry</li> <li>Relevant and related to everyday life</li> <li>Provides opportunities for stewardship and civic action</li> <li>Thought-provoking and intellectually engaging</li> <li>Open-ended (i.e., typically will not have a single, final, and correct answer)</li> <li>Promotes further inquiry (i.e., raises additional questions)</li> <li>Encompasses both natural and social systems and topics</li> <li>Requires students to revisit the problem frequently as knowledge and understanding evolve</li> <li>Calls for higher-order thinking, including analysis, inference, prediction, and evaluation</li> </ul> <p><i>(Score 0 if zero or one box is checked; Score 2 if two to four are checked; Score 4 if five to seven are checked; Score 6 if eight or more are checked.)</i></p>	0 2 4 6
<p><b>During the MWEE, students engage in background research in order to understand the issue and develop supporting questions for further investigation.</b></p> <p><i>(Score 0 if no background research is required; Score 2 if some minimal teacher directed background research required; Score 4 for increasing level of student direction during the background research and development of supporting questions, Score 6 if substantial background research is required and students develop their own supporting questions for further inquiry.)</i></p>	0 2 4 6
<p><b>During the MWEE, students reflect on personal and public values and perspectives.</b></p> <p><i>(Score 0 if values and perspectives are not incorporated; Score 2 if personal and/or public values and perspectives are peripheral to the MWEE for students; Score 4 if personal and public values and perspectives are fully integrated into the MWEE.)</i></p>	0 2 4
<b>Subtotal</b>	___/20

## CRITERIA

**Less than or equal to 10:** Your project needs to focus on a locally relevant environmental problem, issue, or phenomenon requiring background research, further inquiry and investigation to be a MWEE. Don't be discouraged, there are resources and tools to help!

**Between 11 and 15:** There are elements of issue definition but the identified issue and/or questions could be more comprehensive and complex. Review the sections where you did not score highly and see what you might be able to do to earn more points.

**Greater than or equal to 16:** Congratulations! There are always areas for improvement, but your project is focused on a locally relevant environmental problem, issue, or phenomenon requiring background research, further inquiry and investigation.

**For help, check out “Developing Driving & Supporting Questions” in the Toolbox of An Educator’s Guide to the MWEE.**

## IDEAS TO STRENGTHEN ISSUE DEFINITION

Local Context	Score
<p>Evaluate the extent to which the MWEE occurs within a local context (i.e., schoolyard, neighborhood, town, or community). The local context is important for establishing the life-relevancy of the problem, issue, or phenomenon being studied and enables students and teachers to explore how individual and collective decisions affect their immediate surroundings as well as the larger environment.</p>	
<p><b>The MWEE is centered on a local problem, issue, or phenomenon that is directly connected to the lives of the students.</b>  <i>(Score 0 if there is no local relevance; Score 1 if a local problem, issue, or phenomenon is addressed, but does not directly connect to the students' lives; Score 2 if a local problem, issue, or phenomenon is addressed and directly connects to the students' lives.)</i></p>	<p>0 1 2</p>
<p><b>The MWEE provides opportunities to explore the impacts of locally relevant (i.e. schoolyard, neighborhood, town, or community) environmental issues.</b>  <i>(Score 0 if the students are not exploring their local schoolyard, neighborhood, or community; Score 1-2 if the students are exploring their local schoolyard, neighborhood, or community, but this is not directly (or peripherally) related to investigating the problem, issue, or phenomenon; Score 3 if the students are exploring their local schoolyard, neighborhood, or community and it is directly related to investigating the problem, issue, or phenomenon.)</i></p>	<p>0 1 2 3</p>
<b>Subtotal</b>	<p>___/5</p>
<b>CRITERIA</b>	
<p><b>Less than or equal to 3:</b> Your project needs to occur within a local context to be a MWEE. Don't be discouraged, there are resources and tools to help!</p>	
<p><b>Greater than or equal to 4:</b> Congratulations! There are always areas for improvement, but overall your project is occurring within a local context.</p>	
<p><b>For help, check out “Creating Outdoor Field Experiences” in the Toolbox of <i>An Educator’s Guide to the MWEE</i>.</b></p>	
<p><b>IDEAS TO STRENGTHEN LOCAL CONTEXT</b></p>	

Outdoor Field Experiences	Score
<p>Evaluate student participation in outdoor field experiences that are aligned with the problem, issue, or phenomenon. Investigations and activities conducted during the outdoor field experience(s) address the driving and supporting questions as well as inform student action. To the extent possible students should be actively involved in planning the inquiry that occurs during the outdoor field experience(s). These experiences can take place off-site and on the school grounds.</p>	
<p><b>Students participate in one or more outdoor field experiences.</b>  <i>(Score 0 if students do not go outdoors; Score 3 if students have one outdoor field experience during the course of their MWEE; Score 6 if this occurs more than once.)</i></p>	<p>0 3 6</p>
<p><b>The outdoor field experience(s) are aligned with the problem, issue, or phenomenon the students are studying.</b>  <i>(Score 0 if the field experiences are not aligned with the issue; Score 1 if the field experiences are indirectly aligned with the issue [not necessarily the purpose of the field experience but there is a connection]; Score 2 if the field experiences are related to the issue but are not an integral step to investigating the issue; Score 3 if the field experiences are directly aligned with the issue and necessary to investigating the issue.)</i></p>	<p>0 1 2 3</p>
<p><b>Students are actively involved in planning the inquiry that occurs during the outdoor field experience(s).</b>  <i>(Score 0 if the students are not involved; Score 1-2 if teachers/partners plan outdoor field experiences with little input from students; Score 3 if students are actively involved in the planning including creating/co-creating supporting questions that inform outdoor field experiences.)</i></p>	<p>0 1 2 3</p>
<p><b>Students explore the driving question and supporting questions during the outdoor field experience(s).</b>  <i>(Score 0 if the intent and activities of the field experience[s] are not related to exploring the driving and supporting questions; Score 2-4 if the intent and activities of the field experience[s] are somewhat, generally, or in large part related to exploring the driving and supporting questions; Score 6 if the outdoor experience is designed to purposefully explore the driving and supporting questions.)</i></p>	<p>0 2 4 6</p>
<p><b>Subtotal</b></p>	<p>___/18</p>
<p><b>CRITERIA</b></p> <p><b>Less than or equal to 11:</b> Your project needs to include one or more outdoor field experiences sufficient to investigate the problem, issue, or phenomenon to be a MWEE. Don't be discouraged, there are resources and tools to help!</p> <p><b>Between 12 and 14:</b> There are outdoor field experiences but they could be more directly connected to investigating the issue and questions being studied and/or increased student involvement in planning the inquiry. Review the sections where you did not score highly and see what you might be able to do to earn more points.</p> <p><b>Greater than or equal to 15:</b> Congratulations! There are always areas for improvement, but your project has one or more outdoor field experiences sufficient to investigate the problem, issue, or phenomenon.</p> <p><b>For help, check out “Creating Outdoor Field Experiences” in the Toolbox of <i>An Educator’s Guide to the MWEE</i>.</b></p>	
<p><b>IDEAS TO STRENGTHEN OUTDOOR FIELD EXPERIENCES</b></p>	

Synthesis and Conclusions	Score
Evaluate the extent to which the MWEE supports students analyzing and interpreting their data to draw conclusions, make claims, and communicate about their investigation.	
<p><b>Students have dedicated class time to analyze, interpret, and make conclusions based on their research, outdoor field experiences, and related data analysis.</b></p> <p><i>(Score 0 if no time; Score 2 if students have one in-class opportunity to make conclusions; Score 4 if two opportunities; Score 6 if students regularly revisit their research throughout the MWEE to make conclusions.)</i></p>	0 2 4 6
<p><b>Students communicate the results and conclusions of the investigation to inform and/or engage in scholarly argument with their peers or an audience. Note, this is different from communicating to build awareness about a MWEE experience, and Civic and Community Engagement types of action projects where students communicate to persuade an audience to take action.</b></p> <p><i>(Score 0 if none; Score 1 if students communicate broadly about their MWEE experience, but do not present results of the investigation; Score 2 if students only present basic results of the investigation; Score 3 if students construct coherent explanations of the investigation using evidence and demonstrate their understanding of the issue, problem, and phenomenon.)</i></p>	0 1 2 3
<b>Subtotal</b>	___/9
<p><b>CRITERIA</b></p> <p><b>Less than or equal to 3:</b> Your project needs to include synthesis, conclusions and communication of the claims drawn through the investigation of your issue and questions to be a MWEE. Don't be discouraged, there are resources and tools to help!</p> <p><b>Between 4 and 7:</b> There is some synthesis, conclusions and communication of your investigation but it can be more extensive. Review the sections where you did not score highly and see what you might be able to do to earn more points.</p> <p><b>Greater than or equal to 8:</b> Congratulations! There are always areas for improvement, but your project has student-centered action projects that address conclusions and claims drawn through the investigation of your issue and questions.</p> <p><b>For help, check out “Moving from Claims to Informed Action” in the Toolbox of <i>An Educator’s Guide to the MWEE</i>.</b></p>	
<p><b>IDEAS TO STRENGTHEN SYNTHESIS AND CONCLUSIONS</b></p>	

Stewardship and Civic Action	Score
Evaluate the extent to which students identify, explore, and implement solutions that address the conclusions and claims drawn through investigation and consider the effectiveness of these solutions.	
<p><b>Students develop a claim based on their synthesis and conclusions that warrants informed action.</b></p> <p><i>(Score 0 if no, Score 2 if yes.)</i></p>	0 2
<p><b>Students identify and explore multiple solutions based on their claim and select an action to implement.</b></p> <p><i>(Score 0 if students do not explore solutions; Score 1 if students do not explore multiple solutions; Score 3 if students explore multiple solutions, but action has been preselected by teacher; Score 4 if students explore multiple solutions and select action.)</i></p>	0 1 3 4
<p><b>The selected action is directly aligned with the issue the students are studying.</b></p> <p><i>(Score 0 if action is not connected to the issue; Score 2 if action is indirectly aligned to the issue; Score 4 if action is directly aligned to the issue.)</i></p>	0 2 4
<p><b>Students plan and implement the selected action.</b></p> <p><i>(Score 0 if the students are not involved at all; Score 2 if students are involved in implementation, but not it's design or if they plan a project but don't implement it; Score 5 if students are involved in both, but the teacher planned the details of the action; Score 8 if students are involved in both planning and implementing the action.)</i></p>	0 2 5 8
<p><b>Students reflect on the action and explore how they can continue to affect change related to the issue.</b></p> <p><i>(Score 0 if students do not reflect on the action; Score 1 if students reflect on the action; Score 2 if students reflect on the action and explore how they can continue to affect change.)</i></p>	0 1 2
<b>Subtotal</b>	___/20
<p><b>CRITERIA</b></p> <p><b>Less than or equal to 7:</b> Your project needs to include stewardship and civic action that address conclusions and claims drawn through the investigation of your issue and questions to be a MWEE. Don't be discouraged, there are resources and tools to help!</p> <p><b>Between 8 and 14:</b> These are action projects but they could be more directly connected to investigating the issue and questions being studied and/or increased student involvement in planning and implementation. Review the sections where you did not score highly and see what you might be able to do to earn more points.</p> <p><b>Greater than or equal to 15:</b> Congratulations! There are always areas for improvement, but your project has student-centered stewardship and civic action that address conclusions and claims drawn through the investigation of your issue and questions.</p> <p><b>For help, check out the “Stewardship and Civic Action” section of the Environmental Literacy Model (ELM) in the Toolbox of An Educator’s Guide to the MWEE.</b></p>	
<p><b>IDEAS TO STRENGTHEN STEWARDSHIP AND CIVIC ACTION</b></p>	

Active Teacher Support	Score
<p>Evaluate the extent to which the MWEE supports teacher facilitation and ongoing student learning. Teachers ensure that the essential elements of the MWEE come together to support academic goals for learning while creating opportunities for students to take active roles in that learning process.</p>	
<p><b>Classroom teacher facilitates student investigation of the driving and supporting questions during <i>issue definition</i>.</b></p> <p><i>(Score 0 if the teacher is not involved at all; Score 1 if the teacher is involved but mostly facilitated by an partner; Score 2 if teacher facilitated or cofacilitated with partner.)</i></p>	<p>0 1 2</p>
<p><b>Classroom teacher facilitates student investigations of the supporting questions during <i>outdoor field experiences</i>.</b></p> <p><i>(Score 0 if the teacher is not involved at all; Score 1 if the teacher is involved but mostly facilitated by partners; Score 2 if teacher facilitated or cofacilitated with partner)</i></p>	<p>0 1 2</p>
<p><b>Classroom teacher facilitates the students' selection, design, and implementation of <i>stewardship and civic action</i>.</b></p> <p><i>(Score 0 if the teacher is not involved at all; Score 1 if the teacher is involved but mostly facilitated by partners; Score 2 if teacher facilitated or cofacilitated with partner)</i></p>	<p>0 1 2</p>
<p><b>Level of classroom teacher's role in the <i>synthesis and conclusions</i>.</b></p> <p><i>(Score 0 if the teacher is not involved; Score 1 if somewhat involved; Score 2 if actively involved.)</i></p>	<p>0 1</p>
<p><b>Subtotal</b></p>	<p>___/8</p>
<p><b>CRITERIA</b></p> <p><b>Less than or equal to 2:</b> Your project needs to include more teacher facilitation and ongoing support of student learning to be a MWEE. Don't be discouraged, there are resources and tools to help!</p> <p><b>Between 3 and 4:</b> There is some teacher facilitation and ongoing support of student learning but it could be more extensive. Review the sections where you did not score highly and see what you might be able to do to earn more points.</p> <p><b>Greater than or equal to 5:</b> Congratulations! There are always areas for improvement, but your project has active teacher facilitation and ongoing support of student learning.</p> <p><b>For help, check out the Environmental Literacy Model (ELM) in the Toolbox of <i>An Educator's Guide to the MWEE</i> and look for opportunities where the classroom teacher can engage.</b></p>	
<p><b>IDEAS TO STRENGTHEN STEWARDSHIP AND CIVIC ACTION</b></p>	

Sustained Activity	Score
Evaluate the extent to which the MWEE is a sustained activity that engages students from beginning to end and includes a variety of rich and connected learning opportunities spread over the course of a unit or multiple units. Experiences such as tours, gallery visits, simulations, demonstrations, and nature walks may be instructionally useful, but alone do not constitute a MWEE.	
<p><b>The MWEE includes a variety of rich and connected learning opportunities that occur over time.</b></p> <p><i>(Score 0 if the MWEE is completed in one day; Score 1 if the MWEE consists of an outdoor field experience with short pre- and post-classroom activities; Score 3 if the MWEE is integrated throughout a single unit of instruction that takes place at the school or provider sites; Score 5 points if the MWEE is an integrated series of units that occur over a semester or year.)</i></p>	0 1 3 5
<b>Subtotal</b>	____/5
<p><b>CRITERIA</b></p> <p><b>Less than or equal to 1:</b> Your project needs to be a sustained activity that engages students from beginning to end to be a MWEE. Don't be discouraged, there are resources and tools to help!</p> <p><b>Greater than or equal to 3:</b> Congratulations! There are always areas for improvement, but your project is a sustained activity that engages students from beginning to end.</p> <p><b>For help, check out the Environmental Literacy Model (ELM) in the Toolbox of <i>An Educator's Guide to the MWEE</i> to help plan a variety of rich and connected learning opportunities.</b></p>	
<p><b>IDEAS TO STRENGTHEN SUSTAINED ACTIVITY</b></p>	
<b>TOTAL</b>	____/100

For your project to be a MWEE it must incorporate all of the essential elements (issue definition, outdoor field experiences, action project, synthesis and conclusions) and supporting practices (classroom integration, local context, active teacher support, sustained activity) at some level. To determine if your project is a MWEE please follow the criteria below.

**IF YOUR TOTAL SCORE IS:**

**Between 90 and 100—Grade A:** Congratulations! There are always areas for improvement but overall you are running a strong MWEE.

**Between 80 and 89—Grade B:** Your project is meeting the full definition of a MWEE. However your MWEE could be stronger. Review the sections where you did not score highly and see what you might be able to do to earn points.

**Between 70 and 79—Grade C:** Your project is most likely incorporating all of the components of a MWEE. However your MWEE could be much stronger. Review the sections where you did not score highly, especially if it is an essential element section, and see what you might be able to do to earn points.

**Between 60 and 69—Grade D:** Your project does not contain enough components to be a MWEE. Don't be discouraged though, there are resources and tools to help! Review the sections where you did not score highly and see what you might be able to do to earn points.

**Below 60:** Your project is missing the essential elements necessary to meet the full definition of a MWEE. Review the sections where you did not score highly and see what you might be able to do to earn points.

**More information to build or strengthen a MWEE can be found at [baybackpack.com](http://baybackpack.com), including *An Educator's Guide to the MWEE* and an online course.**



# Spotlighting Your MWEE: Tips and Tools for Highlighting Your MWEE to the Media



PLANNING  
TOOLBOX

***We want more people to know about your MWEE!*** Sharing information about your work with the media is a great way to amplify your work—and to build support for MWEEs in general. We know that you are educators, not “PR people,” so we offer this information to get you started.

## Getting Information to Reporters

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- » There are several ways to go about getting “the word” out to media—newspapers, TV/radio stations, bloggers, etc. You may wish to contact a certain reporter at one media outlet, or you may want to send out a more general press release to let several media outlets in your area know about your program. Either way has its benefits!
- » Reporters often like to get “exclusives,” where they are the only media outlet covering a story. This method—usually generated by contacting a specific reporter—will generally get you deeper coverage. These “exclusives” can often be generated by a simple phone call or email to a local reporter, introducing them to your MWEE and inviting them to join you and your students to learn more.
- » Days in the field are very attractive to reporters!
- » Sending out a press release may mean that your content is included in more media outlets—but coverage may not be very deep. In fact, many smaller media outlets—especially online versions of newspapers and blogs—are so strapped for resources and reporters, they often will run your press release verbatim, with no additional reporting involved.

## Press Release Tips

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- » Keep it short and sweet—your goal is to entice readers to call you for more information. Many organizations strive to keep their press releases to one side of a piece of paper; this is a good rule of thumb but not a requirement.
- » Many newspapers, especially in smaller markets, have shrinking resources and fewer reporters than in years past. They may just print your press release verbatim—be sure to include your most important “messages.”
- » Quotes are a great way to share information and convey buy-in from others. Because space is limited, be sure any quotes cover content you want to have in the press release.
- » Be sure to include good contact information—phone and email is best, and make sure it’s to someone who can give a reporter more meaty information about your MWEE (probably to you, rather than your school principal).
- » Headlines are important! Use action words to highlight what you are trying to convey (“NOAA B-WET-funded Project Helps 500 Students Experience Watershed”). In addition to generating interest, this kind of headline tends to make what you want to share very clear.
- » People are eager to learn more...especially if it’s easy. Include links to websites/social media on your MWEE, if available.



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Kim Couranz



**Chesapeake Bay Program**  
*Science. Restoration. Partnership.*

MWEE