Environmental Literacy Plan

Richmond Public Schools

RPS
RICHMOND
PUBLIC SCHOOLS

2024

Table of Contents

Executive Summary

The Richmond Public Schools (RPS) Environmental Literacy Plan puts forth a vision for environmental literacy rooted in environmental justice and specific to Richmond's unique urban and wild landscape. The Plan has been developed for the students at RPS and seeks to support their development into conscientious, confident adult stewards, driven to advocate for the collective good. The Plan situates students within their web of supporters: parents, teachers, administration, community partners, and the City of Richmond as a whole. Collectively, this network invests in the success and well-being of the students who will steward and care for this City, its natural spaces, and its mighty river, the James.

This Environmental Literacy Plan is community-driven, informed and envisioned by years of listening and learning from the people of Richmond. It draws upon existing and complimentary vision plans specific to the City; most notably, Dreams4RPS, RPS' strategic plan; and Richmond's Climate Equity Action Plan 2030. This Plan is dynamic in two ways: first, its content is subject to change with the needs of the school district. Second, it stimulates critical thinking about our relationship to natural and built environments.

In this Plan, environmental literacy is situated within the context of the local networks. This work is especially critical to a City founded upon and still grappling with racial and environmental injustices. Teachers, administrators, and nonformal educators can all use the Goals and Activity Guides to deepen student experiences of outdoor learning, to distribute learning resources more equitably across the district, and to find resources to use in the classroom, the schoolyard, and in the field.

To support those pursuing environmental literacy with care and compassion, we relied on work conducted by the North American Association for Environmental Education and the Alliance for the Chesapeake Bay on Diversity, Equity, Inclusion, and Justice. We recommend the Alliance DEIJ Terminology Guide as a carefully researched and trusted resource.

Crossing onto Belle Isle, a place for nature exploration in the heart of the City

How to Use This Plan

Use the **Table of Contents** and the following points of interest to navigate to relevant content based on your needs. **Why the James River?** and the **Goals** relate to all subsequent document elements.

✶ FORMAL EDUCATORS

Head to the **Activity Guide** to see lesson ideas that combine environmental literacy and standards-aligned content and find out which activities support Meaningful Watershed Education Experience (MWEE) elements. Refer to **How do MWEEs Connect to this Plan?** for a discussion of our approach to integrating MWEEs throughout a student's career. When you are ready to start planning, use the **Supports and Tools** section to reference the **Teach Outside Checklist** and then make connections through the list of **Community Partners.**

✶ NONFORMAL EDUCATORS

If you support environmental literacy in RPS, start at the **Community Partners List** to ensure that you and your organization are included and that the nonformal education community distributes resources equitably across the District. Then, use the **Activity Guide** to identify the lessons and experiences aligned with your mission and expertise. The **Goals** section willt also help you identify future capacity-building or system-level work for your organization to partner with RPS. Finally, read the **What's Next?** section to understand how to support students in their future paths, including higher education and green workforce development.

✶ ADMINISTRATION AND LEADERSHIP

Read the **Goals, Vision Story,** and **Message from Superintendent Kamras** sections first to inform your perspective on our District's environmental literacy journey. Consult the **District Level Recommendations** when considering steps to advance the systems in which environmental literacy thrive. Review the **Teacher Advisory Group Statement** and the **Student Advisory Group Takeaways** to find out what RPS teachers and students are recommending as actions. Finally, use the **Activity Guide** to understand the curricular strategies taking place within your schools.

✶ CAREGIVERS AND FAMILIES

Spend some time with the section **Why the James River?** and **What is Environmental Literacy (and Why Does It Matter)?** for our philosophy on environmental learning and why it's relevant to all of us. Go to the **Vision Story** to see a student artist's depiction of what an RPS-specific environmental literacy journey might look like. Familiarize yourself with your neighborhood using the **School Zones Map.** Check out the **Activity Guide** for outdoor adventures and learning inspiration for your family. Visit the **Community Partners List** to see who to reach out to for more information.

This is a living document. If it is successful, it will change over time.

Message from Superintendent Kamras

The Environmental Literacy Plan (ELP), developed by our dedicated Student Advisory Group, Teacher Advisory Group, Science Specialists, and community members here in the City of Richmond, represents a significant step forward in our commitment to preparing students with the essential knowledge, skills, and attitudes needed to address and resolve the complex environmental issues facing our city, including flooding, urban heat island effect from historical redlining, and reducing greenhouse gas emissions. Richmond Public Schools (RPS) can act not only as an engine to break down barriers but as an engine of justice and equity when facing these issues together. We know for our students and families, none of these issues stand alone. They are intertwined with critical issues facing our city, including lack of affordable housing, healthcare, access to childcare, and public transportation. With this ELP in place, RPS sets the stage for our students to take on roles of leadership and provide the representation necessary so we may all work toward a healthier and more resilient Richmond.

The Environmental Literacy Plan has been built to align with the district's upcoming Dreams4RPS: Let's Keep Dreaming! Strategic Plan. The goals of the ELP support teaching and learning about the James River and its watershed in a way that is locally relevant to students and fosters a sense of civic action. The vertical alignment of driving questions allows for a familiarity to the outdoors to take shape as students move through the grade levels. Activities range from indoor, classroom focus, to schoolyard experiences and finally opportunities to learn in the field. It calls for community partners to collaborate with RPS teachers and distribute resources equitably throughout the district. This holistic approach is crucial for nurturing informed and active participants who feel a sense of belonging in the outdoors.

One of the key strengths of the Environmental Literacy Plan is how it has laid a foundation for future RPS students. As we articulate a vision around theme-based high schools, I can imagine a future RPS student taking an environmental justice pathway. Following the Vision Story, you can trace milestones and experiences this student would have if attending RPS. These milestones forge a deep connection between students and the James River, fostering confidence, passion and responsibility.

Environmentally literate students will graduate knowing the science behind climate change and feel confident questioning information about the environment. Answers yielded will inform their responsible decision-making when faced with supporting or opposing environmental policy. RPS supports this ELP so that students can be the best advocates for themselves, their families and their communities.

I am confident that the implementation of the Environmental Literacy Plan will have a profound and lasting impact on our students and the wider community. As we move forward, I am eager to support the continued integration of environmental literacy into our educational framework.

Signed,

Jason Kamras
Superintendent of Richmond Public Schools

Teacher Advisory Group Statement of Support

Dear Richmond,

This document was created by a group of RPS teachers to be used by fellow teachers.

The spirit of this document is to make environmental experiences for our students more practical for RPS teachers. We understand that for students to learn, consistently, in and about their environment from kindergarten to senior year, educators must be equipped and empowered to provide those experiences. This Environmental Literacy Plan provides a big-picture view of the importance of environmental education and the resources to make it possible.

It is our hope that students fall in love with their environment and the James River through the activities and lessons their teachers provide. It is also our hope that our students will continue to appreciate and care for their environment. Students will come to understand their connection to and influence on the watershed and be empowered to steward it for generations to come.

Inside you will find activities, lessons, experiences, and logistics that are tied to the dual goals of promoting standards-based learning and fostering knowledge, stewardship, and sense of belonging in the outdoors. We hope that it will prove to be a functional and inspiring resource for your classrooms and schoolyards.

Get Outside!

The 2024 ELP Teacher Advisory Group

Amina Ahmed: Science - River City MS
Eunique Bryant: Self-contained - Oak Grove Bellemeade ES
Brooke Cosans: SPACE - Bellevue, Fox, & Obama ES
Allen Dickerson: MS Math - Lucille M Brown MS
Cullen Dolson: LIEP Science - Richmond High School for the Arts
Dawn Maskell: ESL - Blackwell ES
Jonathan Metcalf: History - Armstrong HS
Summer Schultz: Science - Richmond Community HS
Kat Shearer: 2nd Grade - Fox ES
Tracy Smith: 3rd Grade - Chimborazo ES
Chloe Tremper: Science - Boushall MS
Greysi Vasquez: World History - Huguenot HS

Student Advisory Group Takeaways

During the 2023-2024 School year, nine students from five Richmond Public Schools formed a Student Advisory Group to provide input to the Environmental Literacy Plan. The "SAG" meetings centered on how high school students currently view environmental issues and what they consider essential content for a district level environmental literacy plan.

Over four meetings, the SAG examined environmental issues and themes that intersect with their lives within and outside of the school building - urban heat islands, air quality, flooding, and other changes they witness as a result of the impacts of climate change. Students were encouraged to draw upon their own experiences growing up, consider specific activities that stood out as educational and fun, or field trips that had an impact on their learning. Through a series of guided conversations and group work, they identified the knowledge and skills they felt were essential to be considered an environmentally literate graduate of RPS. At our final meeting, they worked together to create a timeline of a theoretical student's pathway from Pre-K to graduation, highlighting specific common experiences at defined grade levels. This exercise generated the narrative for the Vision Story of an environmentally literate graduate, found in this plan. Teens from a summer green workforce development program (Teens of Richmond in Parks) then took this narrative to create the illustrations. We recommend continuing a Student Advisory Group that works to refine and adapt the current ELP into the future.

Students identified the following skills in an environmentally literate graduate. Note how closely this list aligned with the Virginia Department of Education's ★ (VDOE) profile of a Virginia graduate.

- ✓ **Critical thinking**
- ✓ Problem solving
- ✓ Listening
- ✓ **Open-mindedness**
- ✓ Conflict resolution
- ✓ Confidence in teaching others
- ✓ **Communication**
- ✓ Bravery
- ✓ **Motivation to civic participation and advocacy**
- ✓ Ability to define environmental literacy

VDOE's Profile of a Virginia graduate*

- ✓ **Critical thinking**
- ✓ **Creative thinking**
- ✓ Collaboration
- ✓ **Communication**
- ✓ **Citizenship**

According to the student representatives, an environmentally literate graduate:

1. Possesses an "anything is possible" mindset
2. Asks ontological questions and has tools to explore them
3. Has a relationship with the environment and living things
4. Understands the basics of climate change
5. Equitably accesses outdoor spaces in Richmond
6. Understands the importance of James River and how to keep it healthy
7. Possesses awareness of the following environmental impacts:
   - personal
   - collective human
   - corporate
8. Understands the resources that Earth provides for humans
9. Recognizes that solving environmental problems, including climate change, is everyone's problem and responsibility.

★ www.doe.virginia.gov/parents-students/for-students/graduation/policy-initiatives/profile-of-a-virginia-graduate

Finally, certain elements recurred throughout SAG's discussions and meetings. We recommend considering the following student-generated list when shaping curricular and facility priorities into the future:

1. Connection

A greater **connection** between field and classroom, more exposure to the natural world, and more focus on the intersection between science and society, especially as it relates to environmental justice.

2. Gardening

Gardening as a learning tool at all grade levels that teaches practical and professional skills, offers mental health benefits as well as lessons on photosynthesis, seasons, climate, temperature, cooking and nutrition, and cultural history.

3. Outside Breaks

Recess or a break in the day to go outside at every grade level, and **space to eat lunch outside** at every school.

4. Peer Learning

Peer learning as a complement to learning that occurs from their teachers. Peer to peer opportunities offer a mutual benefit from both parties involved as learning is received on one end and reinforced on the other.

5. Windows

Windows in buildings and **trees** in clear view, outside of each school. One student discussed how glimpses of trees through her school's windows positively affected her emotional well-being as she traveled from one class to another. Conversely, she spoke about how closed-in and trapped solid walls between classes made her feel. She reflected on how much more available and ready to learn she was after experiencing the journey from one class to the other as a brief respite in nature.

Special thanks to our initial SAG!

Kayla Robinson, Armstrong High School
Najay Johnson, Armstrong High School
Raemon Cox, Franklin Military Academy
Christopher Dejesus, Franklin Military Academy
Knahbi Aponte, Open High School
Liz Diaz-Barriga, Open High School
Somer Martinez Merino, Richmond Community High School
Amelia Fields, Richmond Community High School
Brigith Vitervo, Richmond High School for the Arts


GIANT

Goals and Objectives

1	2	3	
Drive environmental literacy in Richmond Public Schools, framed by the James River Watershed, to cultivate responsible, responsive, and informed graduates with 21st century skills.	**Create and maintain a living document that provides RPS teachers with an instructional framework** that connects state and district requirements with environmental literacy.	**Collaborate with community partners** to build upon existing learning opportunities for staff and students.	
a. Define environmental literacy b. Provide teachers and community partners with concrete tools for environmental literacy	a. Provide standard aligned-classroom, schoolyard, and field experiences supporting environmental literacy.		OUTLINED IN ELP
c. Distribute environmental literacy education resources equitably across the district.	b. Establish vertical alignment from prek-12th grade of Meaningful Watershed Educational Experiences and other environmental learning opportunities. c. Provide classroom teachers with meaningful and relevant professional support to expand their knowledge base, implement environmental literacy initiatives, and gain familiarity with the schoolyard as an environmental learning tool.	a. Use a Community Partner Map to match schools with nonformal educators in order to link out of classroom learning to in classroom learning. (Priority 2, Action 2.6, DREAMS4RPS) b. Recognize and honor milestones resulting from collaboration with partners to foster a sense of pride and motivation within the school community.	IN PROGRES
	d. Make structural and administrative recommendations that support ELP implementation success.	c. Align schools and partners equitably across the school district.	FUTURE

Left: Students exploring James River Park System's Main Area

Why the James River?

The James River distinguishes and defines Richmond. It touches each City resident's life by providing drinking water, opportunities for experiential learning, economic vitality, and joy. Meandering through the City, the James laps on the shorelines of wild, tangled forest. Picking up speed as it travels downstream, the river encounters greater urban concentration and, bolstered by heavy precipitation, surges across city streets and through storm drains. These intersections of natural and built environments ground each Richmonder's sense of place and remind us of our intrinsic dependence upon waterways to sustain us. Through multiple narratives and disciplines, researchers, teachers, and students can explore the impact that the river has had on the natural and human histories and present conditions of Richmond. The river at our center holds relevance for those happiest with structures and sidewalks just as much as it does for those seeking wilderness experiences. We have chosen to center the James River in this environmental literacy plan because it sustains life, it flows through the City, and challenges us to take action.

Familiarity with the ecology and history of the James River in Richmond will expose Richmond students to hands-on tools they need to understand and address issues of environmental justice in their own lives, while extending ownership from their local green spaces to regional and global levels. The leap from students' sense of responsibility for their local watershed to stewardship of the Chesapeake Bay watershed as a whole starts with embracing the importance of care for their home river. This place-based education model aligns with the Chesapeake Bay Watershed Agreement's Environmental Literacy goal, to "enable students in the region to graduate with the knowledge and skills to act responsibly to protect and restore their local watershed." (Chesapeake Bay Watershed Agreement Literacy Goal)

WHAT IS ENVIRONMENTAL LITERACY (AND WHY DOES IT MATTER)?

The North American Association for Environmental Education (NAAEE) defines an environmentally literate person as someone who, "both individually and together with others, makes informed decisions concerning the environment; is willing to act on these decisions to improve the wellbeing of other individuals, societies, and the global environment, and participants in civic life." An individual may be termed environmentally literate based on knowledge, actions, attitudes, and skills related to their environment. (NAAEE, 2022)

While we prioritize science education, environmental literacy is characterized by cross-curricular connectivity and an interdisciplinary approach to solving environmental problems. This plan utilizes a framework focused on formal science education informed by the Virginia Department of Education (VDOE), and we will continue to add curricular elements that encompass the richness of the environmental literacy network across academic subject areas.

Environmental literacy means understanding that the earth's systems are connected, and that human beings are part of that system. We believe that taking care to expose and carefully organize content along a path that incorporates knowledge from earlier lessons will best show students these connections and systems. Experiences along these paths enforce understanding of individual concepts; regularly recurring experiences that build on each other help students understand the connections between them, and through those connections, move toward environmental literacy. Vertically-integrated systems thinking links disciplines to each other, bolsters mental and physical well-being, and improves learning outcomes. Every RPS student deserves the privileges proven to accompany environmental education.

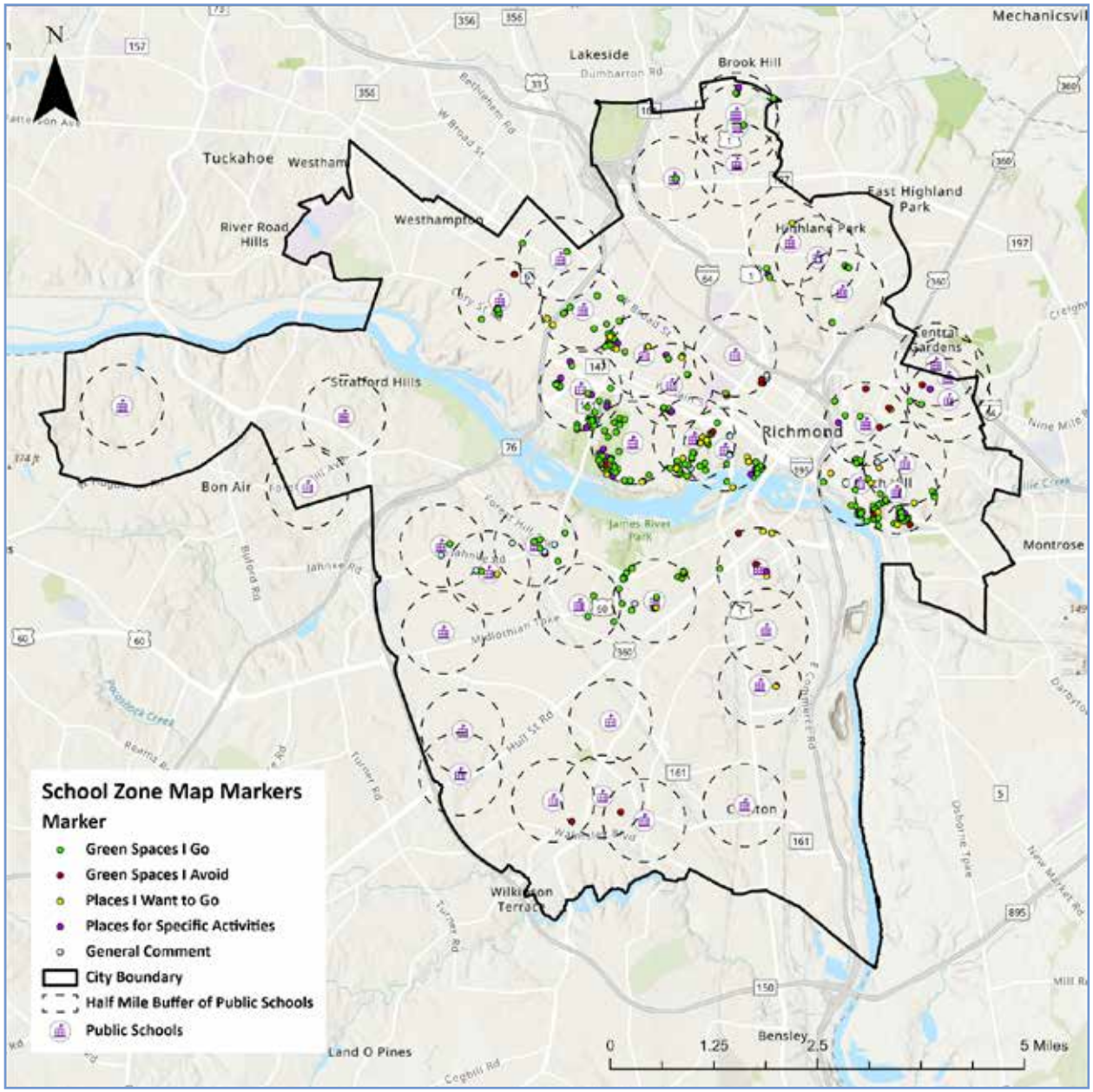
In Richmond Public Schools (RPS), we will use four elements to build environmental literacy:

1. Science knowledge
2. Environmental justice knowledge
3. Use of outdoor space as tool for all classroom teachers
4. Local environmental knowledge of the natural and built environments

WHY THIS PLAN FOR THIS PLACE?

RPS serves students in preschool through grade 12 at 53 schools throughout the City. The district contains five preschools, twenty-five elementary, seven middle, seven high and nine specialty schools. RPS enrollment for the 2023-2024 academic year was 21,259 students. 88.5% of RPS students are people of color; 66.5% are classified as economically disadvantaged, representing a broad swath of vulnerable populations within the City.

Determined teachers, administrators, and support staff are working to provide positive learning environments for their students. RPS describes its strategic planning process as "grounded by three core values - equity, engagement and excellence - and guided by our strategic plan, Dreams4RPS, we are committed to creating schools that are engines of opportunities for ALL of our children and building a school division that actively fights against systemic injustices and institutionalized racism." Likewise, this Plan champions an equitable approach to environmental learning. This document celebrates the teaching and learning excellence that is already in effect, while ensuring that this excellence reaches all corners of the City.



Survey data suggests that people visit green spaces that are close to both schools and the James River. (See Appendix 2). These results emphasize the importance of hyper local green spaces surrounding schools, not just those naturally occurring near the river.

WHY THIS PLAN FOR THIS PLACE? Continued

Students exploring a side channel of the James River by kayak

"In order to sustain life, we must be in touch with our surroundings. We live, grow and glow based on what's in our surroundings."

— Cheryl Burke, 7th District, Richmond School Board

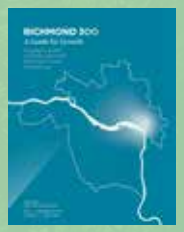
Safety in schools and public spaces is a high priority shared among the wider partnership community; concern for safety was voiced strongly by caregivers as well as partner organizations during community engagement periods. The community relies on the City of Richmond to protect the safety of public green spaces, and all Richmond residents share responsibility to support this important work. Environmental education works to improve safety by activating and stewarding public lands and waters.

Richmond, Virginia has a complicated relationship to our outdoor spaces. The scars of institutional racism persist in Richmond, especially as the historic practice of redlining continues to correlate with present day climate and health disparities between our neighborhoods. See Plumer and Popovitch, 2020; How Decades of Racist Housing Policy Left Neighborhoods Sweltering and Richmond's Climate Equity Index. Climate equity means addressing climate change in a way that is inclusive of and prioritizes those who are being impacted first and worst, in stark contrast to these historic practices. Lower income populations and communities of color are more likely to live in areas with potential for greater impacts. By creating this Environmental Literacy framework, we are using environmental education as one solution to build a more sustainable, equitable City.

We envision the Environmental Literacy Plan as nested within and guided by the larger plans listed below:

Local

RVAgreen 2050: Climate Equity Action Plan 2030: The plan's vision states that all Richmonders, regardless of their identity or neighborhood, thrive in a climate-resilient and climate-neutral community.



Richmond 300: A Guide for Growth, the City's Master Plan: The plan is aimed at ensuring that Richmond is a welcoming, inclusive, diverse, innovative, sustainable, and equitable city of thriving neighborhoods, ensuring a high quality of life for all.

Richmond INSPIRE

RichmondINSPIRE: A citywide vision plan for Richmond's Department of Parks, Recreation, and Community Facilities.

Regional

→ Chesapeake Bay Watershed Agreement: Student Outcome

→ Virginia Department of Education Standards of Learning's Essential Knowledge and Practices

→ Virginia Department of Conservation and Recreation's (DCR) Environmental Education K-12 Literacy Strategic Plan (in progress).

HOW DO MWEES CONNECT TO THIS PLAN?

NOAA's Meaningful Watershed Educational Experience (MWEE) "is a learner-centered framework that focuses on investigations into local environmental issues and leads to informed action." The framework contains four essential elements: issue definition, outdoor field experiences, synthesis and conclusions, and environmental action projects. These MWEE elements are woven into the Plan's Activity Guide. They connect students, through investigation of their local watershed, to the regional sustainability and resiliency efforts and ultimately to action throughout the Chesapeake Bay watershed.

As a school district, RPS is moving toward a model of watershed education at all grade levels. Rather than individual grade levels receiving all four MWEE components at once, we envision an environmental literacy model that infuses elements of MWEE across each grade level, ensuring that all students learn about the watershed during each school year.

During elementary school years, watershed learning must be especially fluid because that is when students are invested in the critical work of building identity and their understanding of the relationship between self and other. A high frequency of exposure to the outdoors during this period of development helps students place trust in, ask questions about, and find joy within the natural world while that exposure simultaneously builds self confidence. Foundations of confidence, joy, and curiosity outdoors prepares students for successful MWEE work as their schooling progresses. **Community feedback when developing this Plan underscored the importance of regular exposure; multiple people unearthed connections between their positive adult attitudes about the environment and their childhood experiences in the outdoors.**

Sixth grade is an exceptional year with regard to this approach to MWEEs; in order to align with the Virginia Standards of Learning and to honor the cognitive readiness of these students, sixth graders receive all four components during this one academic year.

Establishing early familiarity and affection for nature in pre-kindergarten through fifth grade and subsequently concentrating instruction in 6th grade will lay the groundwork for high school students to deepen and broaden their capacity for action. New high school students will have the interest and knowledge to take advantage of the wealth of learning opportunities offered by community partners and to focus their environmental literacy journey according to their skills and passions. MWEE action projects take on greater significance as students step into newfound independence and emerge as community leaders, ready to collaborate to address our greatest challenges.

"I am personally very tied to nature. I think it's a vital source of energy for me. I would like to see our young people develop that attachment because it grounds you in a perspective that creates a kind of permanency about life beyond the 80 or 90 years that we have."

– Stephanie Rizzi, 5th District, RPS School Board

WHAT'S NEXT?

Environmental education strengthens students' senses of identity, confidence, and belonging in their city and the world, and these qualities will support them whether they choose to pursue higher education or enter the workforce upon graduation. A wide body of research supports the connection between outdoor learning and significantly improved physical and mental wellbeing. Some of the most notable benefits demonstrated in that research are reduced stress, greater emotional regulation, longer focus, and stronger relational skills. Students with these characteristics have a higher chance of success wherever their path takes them (Elevating the Role of the Outdoor Environment for Adolescent Wellbeing in Everyday Life and Stanford analysis reveals wide array of benefits from environmental education). While this plan connects most directly to science content and emphasizes experiences and learning that support science knowledge and skills, we expect students to reap manifold benefits from these experiences.

Careers specifically related to environmental and outdoor learning fit all kinds of people. It is possible, with environmental education as your platform, to work outside every day. It is also possible to work in an office behind a computer. It is possible to dream and design. It is also possible to work with your hands, to create and to manipulate. It is possible, from environmental education, to pursue solo practices. It is also possible to speak, advocate, and collaborate.

A "green workforce" encompasses landscape architecture, engineering, operations and field work, preservation and conservation work, education, recreation, politics, and entrepreneurship. The City of Richmond needs all of these professionals and their unique specialities in pursuit of environmental equity and a more sustainable future for all.

Green workforce development on the grounds of Bellevue Elementary School

Vision Story

Like the Richmond 300 Master Plan's vision story, this story shows how the Environmental Literacy Plan could positively impact each student's school journey. It is our dream that such a path will lead to confident, secure students, who are motivated to contribute positively to the future of our shared City and the world. What vision story would you tell?

1

In 2030, 4-year-old Keylani begins her RPS journey at Blackwell Preschool. Her school is shaded by large trees and a school garden with Keylani's favorite blackberry vines. Keylani's teacher, Mr. Scott, often takes his class outdoors to learn.

2

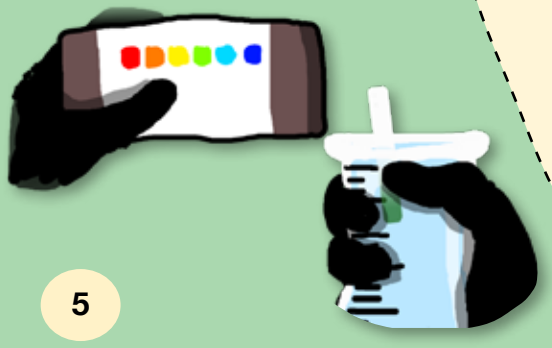
Keylani and her father walk back and forth to school each day on paths that are safe from cars and vehicles.

3

At a field trip to Bellemeade Park, Keylani plays independently in the woods and on the streambank. She feels confident and brave.

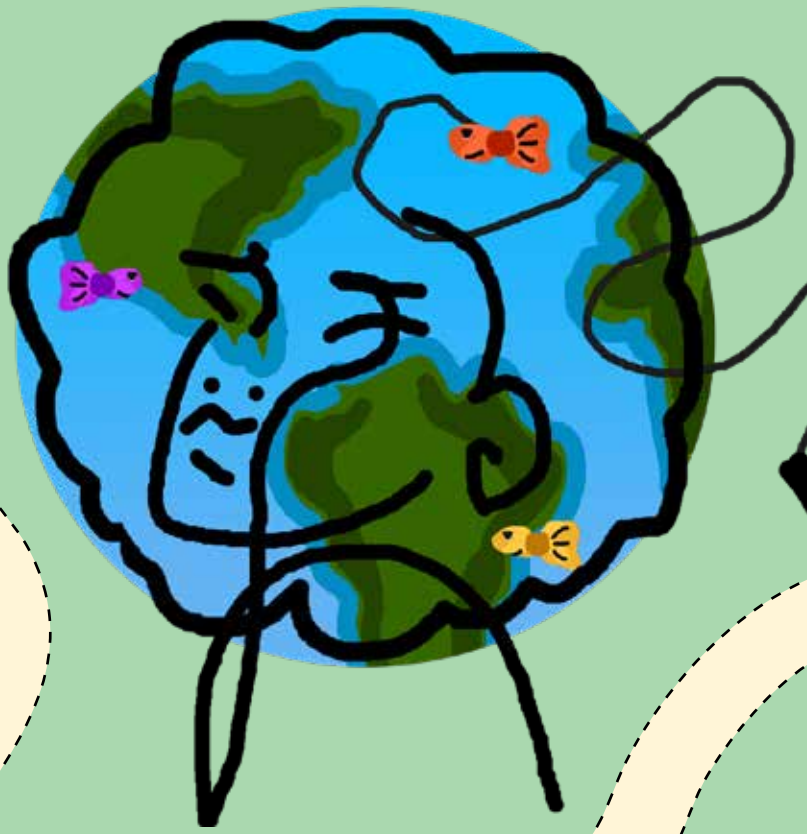
4

In 2nd Grade, Keylani's Blackwell Elementary School class visits the James River and walks across the pedestrian bridge to Belle Isle. Keylani loves playing a game that shows her how the water in the river cycles through the atmosphere and supports the mallard ducks she spies paddling downstream.



5

When Keylani reaches 6th grade at River City Middle School, the 8th graders teach her to measure water quality in the James River and make inferences about the overall health of the watershed. Keylani notices that the streams in certain parts of the City measure as significantly healthier than other areas in Richmond.



Because of the Environmental Literacy Plan, Keylani grows up with the skills and knowledge to make the world a better place through environmentally conscious decision making.

8

7

Keylani and her classmates enjoy eating lunch outdoors, and find their learning environment strengthened by Open's large windows.

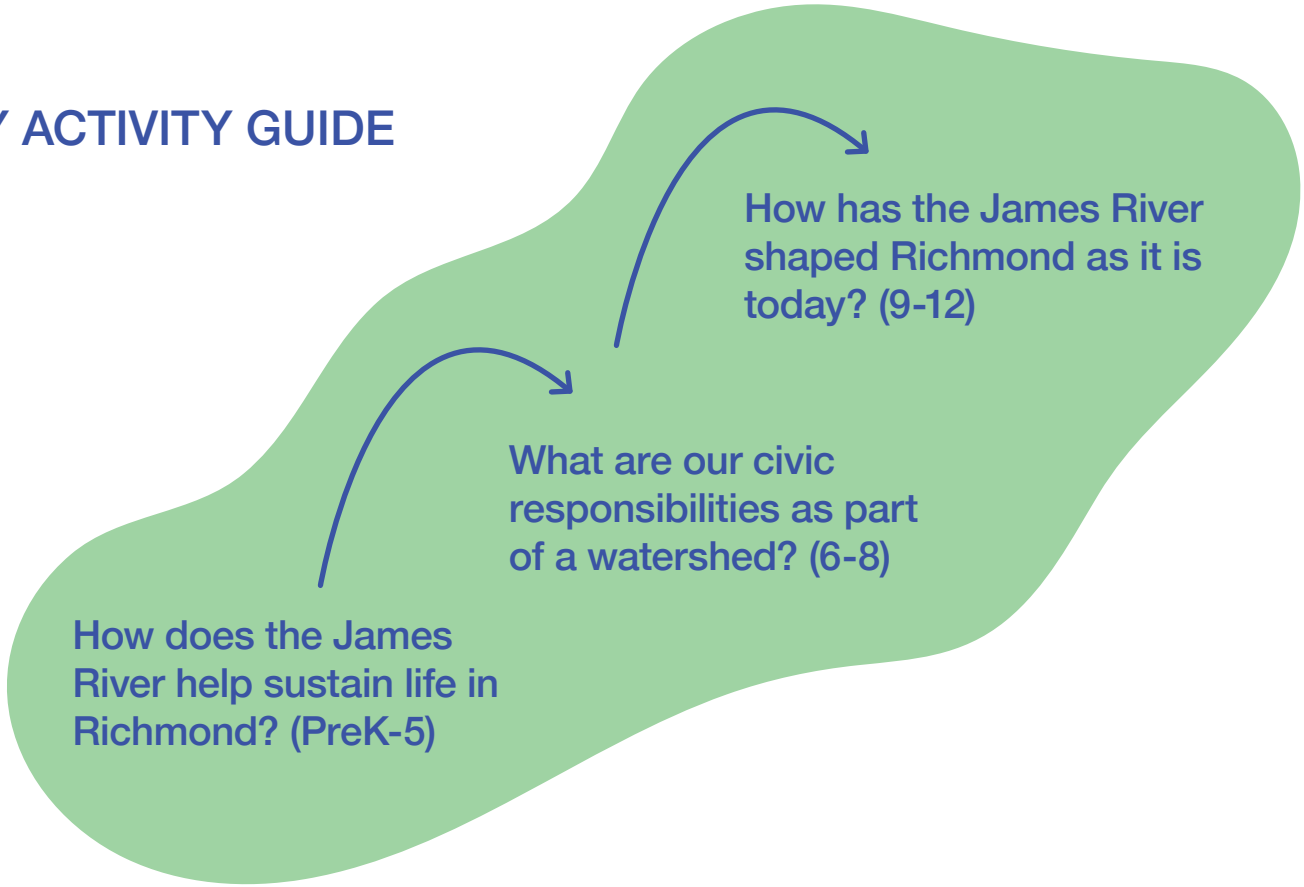
6

Motivated by her love of the outdoors, as a student at Open High School Keylani joins her school's environmental club, and together they advocate for climate resilient policies to protect Richmond's natural resources in the face of a warming planet.

Artwork by RPS student artist Jay Campbell

Supports and Tools

ENVIRONMENTAL LITERACY ACTIVITY GUIDE



This tool is designed for educators interested in exploring a subject through the lens of environmental literacy. Three driving questions spark curiosity and can be explored from multiple perspectives. Each question has its own place, and while they speak to the same theme, they are different enough to scaffold upon each other. The Guide is further organized by a driving question at each grade level, aligned to state standards and accompanied by suggested activities based in three categories. Classroom experiences take place within the walls of the school building. Schoolyard experiences are conducted outdoors surrounding the school building. Field experiences transport students to a different location. While each recommended activity is content specific, all emphasize the Science and Engineering Practices (SEPs) that are embedded throughout the VA Science Standards. These skills are essential for deeper learning in sciences and greater understanding and appreciation of the natural world.

The City of Richmond is located within the Chesapeake Bay watershed. Students in Virginia learn that water from rain or snowmelt on their school building flows through their local stream (see Appendix 1) into the James River to the Chesapeake Bay and ultimately the Atlantic Ocean. Meaningful Watershed Educational Experiences (MWEEs) help connect students to this concept and offer a chance to deepen their relationship to the natural world.

MWEE

Look for this icon next to activities that are an example of a MWEE element.

Seining at the York River

How does the James River help sustain life in Richmond?

Environmental Literacy Activity Guide: K-2nd Grade

Driving Question	Classroom Experience	Schoolyard Experience	Field Experience
Kindergarten			
How can I classify the world around me? (K.3, K.5b, K.6a, K.9)	Much of Kindergarten science is related to using senses to discover the world. For example, in Classify Using Sensory Descriptions students practice using all 5 senses by investigating different objects and assigning descriptors.	Classification and observation skills can also be practiced in the schoolyard using the Touch and Feel Hike to build sensory awareness.	Visit to Bellemeade Park MWEE
1st			
How do my actions affect the availability of natural resources? (1.8b)	This standard lends itself to a project-based series of lessons that allow students to examine the natural resources they use regularly. For example in Paper at School, students design plans to conserve paper at school, communicate the plan and survey to determine its effectiveness.	Students can explore the natural resources that exist in their schoolyard by examining specific areas using quadrats over time in the activity, Schoolyard Data Collection. MWEE	Tour a local CVWMA Soild Waste Collection Site or Tour the TFC Recycling Facility in Chesapeake, VA
2nd			
How can human influences change habitats? (2.5c)	Students can examine the effect that daily human activities have on natural habitats through this lesson, Thermal Pollution: Water Temperatures can Hurt Fish in which students watch a video about a girl taking care of her fish tank at home. Discussion questions are provided in English and Spanish.	Outside in the schoolyard, teachers can use the activity, Building an Insect Hotel, to have students design, build and observe how insects react to this new potential home. MWEE	Visit Maymont Farm for the Hooray for Habitats program, Plants, What Good are They? or Go With the Flow programs at Lewis Ginter Botanical Garden

How does the James River help sustain life in Richmond?

Environmental Literacy Activity Guide: 3rd-5th Grade

Driving Question	Classroom Experience	Schoolyard Experience	Field Experience
3rd			
How do natural events and humans influence ecosystems? (3.8a-d)	Students in 3rd grade focus on interactions in the world. Human influence on an ecosystem can be modeled in the activity, Who Polluted the River? in which students participate in an interactive story and add "pollution" to a tub of water to simulate how the river has changed through history.	Activities like Litter We Know allow students to collect, survey and analyze litter found in their schoolyard but also enable students to take part in positive action by cleaning up.	Neighborhood/Park Litter Cleanup, Connect with the James River Park System or check out community volunteer opportunities through Community Foundation MWEE
4th			
How do humans (us) affect the James River? (4.8)	Students in 4th grade classrooms can model watershed dynamics and explore common pollutants using lessons like Crumpled Paper Watersheds, or using an Enviroscape (connect with RPS Science Specialist to borrow).	Students conduct a site investigation of their schoolyard and study the impact they have on their watershed using Project Learning Tree's Green School Investigation called School Site Investigation or by taking a Watershed Walk (note: maps need to be adjusted to reflect Richmond). MWEE	Watershed Investigation in the James River Park System
5th			
How do the aquatic and terrestrial ecosystems on the James River affect the watershed and even the ocean systems? (5.8d)	Use the lesson Weathering, Erosion, and Deposition, Oh My! to allow students to come up with solutions for an erosion problem on their schoolyard by testing materials like rocks, popsicle sticks, mulch and moss.	Students can use erosion concepts from their classroom experience in How Do Weathering, Erosion, and Deposition Affect Our Neighborhood? by focusing on how wind and water cause changes in their watershed.	Kayaking/Canoeing trip on the James River with the James River Association or the James River Park System MWEE

What are our civic responsibilities as part of a watershed?

Environmental Literacy Activity Guide: 6-8th Grade

Driving Question	Classroom Experience	Schoolyard Experience	Field Experience
6th			
How do humans positively and negatively impact water quality in the watershed? (6.6d,e,f, 6.8, 6.9) MWEE	The theme of 6th grade science is "Our world; our responsibility." Students can use the tools linked in Model My Watershed to engage in computer modeling of their local watershed or learn similar concepts from an Enviroscape demonstration. (Contact RPS Science Specialist to borrow an Enviroscape).	Teachers can use this 5E lesson series, Watershed Investigations: Exploring Environmental Issues Within Your Community, to support students in exploring how water drains off the schoolyard and develop solutions to mitigate negative impacts of that run off.	Watershed Investigation in the James River Park System
7th (Life Science)			
How do different species affect one another in a watershed ecosystem? What interrelationships between species are important for maintaining balance in a watershed ecosystem? (LS.5, LS.6, LS.7,LS.9, LS.11c)	The Ecology of Hog Island Workbook (which also links to a Student Workbook) allows teachers to lead students through an exploration of the Hog Island watershed, along the James River. Students will use VA Department of Wildlife Resources' Marsh Cam to discover the ecosystem, its history, species diversity, and human influence.	Examine species relationships in students' local watershed using the Schoolyard Biodiversity Investigation to understand the diversity of species that exist in their own schoolyard. MWEE	Visit Maymont Park for Middle School programs such as Wonders of Watersheds, Adaptations: A Game of Survival or Ecosystem Energy Flow
8th (Physical Science)			
What combination of physical and chemical factors are necessary for a healthy river and how does this enhance the sustainability of natural and human communities? (PS.3)	As students grasp the importance of learning about acids/bases, the periodic table, and mixtures, they can explore water quality through the lesson, Classroom Water Quality. MWEE	Students can extend this learning using the Soil Nutrient Testing lesson by examining the nutirent load and pH of the soil surrounding their school building.	Water quality investigation in the James River Park System

How has the James River shaped Richmond as it is today?

Environmental Literacy Activity Guide: 9-12th Grade

Driving Question	Classroom Experience	Schoolyard Experience	Field Experience
Earth Science			
How has water shaped and developed Virginia's landscape, regions, rocks, minerals, & natural resources? (ES.5d, ES.6b,c,d, ES.7c,d, ES.8, ES.9d, ES.10, ES.12c)	Earth Science students can conduct their own experiment to simulate ocean acidification using the lesson, The Mystery of the Disappearing Shells.	Teachers can use Weathering, Erosion and Deposition in the Local Environment lesson to highlight evidence and causes of erosion in their own schoolyard (these lessons need to be adapted for Virginia).	Visit the James River Park System for the Geology of the Fall Zone field investigation. MWEE
Environmental Science			
How do the natural and built environments affect human and animal life in my local watershed? (ENV.8, ENV.9, ENV.10)	Students can examine the local ecosystem through The Natural and Built Environment lesson that promotes deeper thinking on the interactions between living/natural and non-living/human-made parts of an environment. MWEE	Teachers can use the schoolyard as a location for Flying WILD's The Great Bird Migration to extend thinking about how bird species must navigate natural and man-made parts of the environment while migrating. Premade station cards are available.	Wastewater treatment plant tour through Richmond Department of Public Utilities. To book, fill out this form: form.jotform.com/240375619864062 or contact Christal.Bacon@rva.gov.
Biology			
What solutions exist for reducing the negative effects of human activity on the flora and fauna in the James River ecosystem? (BIO.7b, BIO.8c,d)	Students can simulate the life cycle of a sturgeon while exploring what solutions exist for sturgeon to thrive in the James River using the Atlantic Sturgeon Lesson Plan.	Work together as a class to plan and conduct a tree planting on your schoolyard by following these planting tips from Arbor Day Foundation or seek the guidance of Richmond Tree Stewards. MWEE	Take a boat trip with the James River Association to see Atlantic Sturgeon (September only) or visit the Animal Lab at the Science Museum of Virginia.

Environmental Literacy Activity Guide: Cross-Curricular Content

Driving Question	Classroom Experience	Schoolyard Experience	Field Experience
History (6th/7th)			
How does the Fall Line inform the history of Richmond?	Your ideas here!	Your ideas here!	Visit to Henricus Historial Park, the American Civil War Museum, or Richmond Slave Trail  MWEE
History/Civics (8th)			
What policies have state and local government taken to protect the James River and Chesapeake Bay watershed?	Students can view Season 3, Episode 304 of UNTAMED, which highlights the importance of policy action on natural resource and conservation issues. An Activity Packet is available.	Paint sewer drains surrounding schoolyard with a Chesapeake Bay or James River stencil.  MWEE	Visit the General Assembly while in session
US History (11th)			
How did the Richmond watershed influence the historic industrial and social makeup of Richmond?	Use primary sources from the Virginia Museum of History and Culture to investigate the impact of the Civil War on Richmond's environment.  MWEE	Your ideas here!	Visit to the Virginia Museum of History and Culture, the American Civil War Museum, or Richmond Slave Trail.

Environmental Literacy Activity Guide: Cross-Curricular Content

Driving Question	Classroom Experience	Schoolyard Experience	Field Experience
Math			
How can we examine trends in ecology and climate health using math?	Students can use geometry to investigate how the melting of all the ice in Antarctica would impact sea level rise in Geometry Lesson: Calculating Sea Level Rise. MWEE	How Tall is that Tree? uses trigonometry to estimate the heights of tall objects, by making a simple tool that can measure angles. This tool could be used to track trees in your schoolyard.	Measuring and Calculating Stream Flow could be used on a visit to the James River or another nearby waterway.
LIEP (Language Instruction Educational Programs)			
What is my new environment and how do I interact with it in a safe and sustainable way?	Using an Enviroscape model, students can practice green infrastructure vocabulary and concepts (connect with RPS Science Specialist to borrow).	Conduct a stormwater assessment of your schoolyard using this bilingual worksheet in English/Spanish. Additional translated materials can be found here, potomacriver.org/resources/educator-resources/bilingualmaterials/.	Work together as a class to plan and conduct a tree planting on your schoolyard by following these planting tips from Arbor Day Foundation or seek the guidance of Richmond Tree Stewards. MWEE
Government			
How does the role of the James River watershed affect the local community of Richmond?	Teachers can use this 5E lesson, The lines that shape our cities: Redlining & Environmental Inequalities plan to help students understand the role the government plays in shaping our communities.	Teachers can guide students to use resources like Redlining Richmond Storytelling Map and primary sources in Redlining in Richmond: Home vs Nationwide to discover the relationship between redlining and their own school property. MWEE	Your ideas here!

TEACH OUTSIDE CHECKLIST

BEFORE

☐ Discuss healthy risk taking with your students.

☐ Check the weather 3 times and plan around days that look best.
- ✓ 3 days before
- ✓ 1 day before
- ✓ Morning of the outside experience

☐ Note where you will have shade and sun; Plan for wind and a range of temperatures.

☐ Make a plan B.

☐ Prepare and pack tools: clipboards, white boards, pens/pencils, first aid kit, bucket/ bin (that can double as a teacher seat). *

☐ Prepare your students. Talk about what you will be doing outside and what to wear to be comfortable.

☐ Visit your activity site. Identify natural objects that could be used in your lesson. Leaves could be points on a nature graph, sticks can measure lengths. etc.

☐ Understand your class's needs using **GAMEFACE**. Review any accommodations for students that might be different outside than in your classroom.

GAMEFACE

Gender
Age
Medical conditions
Experience in the outdoors
Familiarity with others
Ability
Culture
Ethnicity

* **Missing something? Connect with your RPS Science Specialists to find the materials you need.**

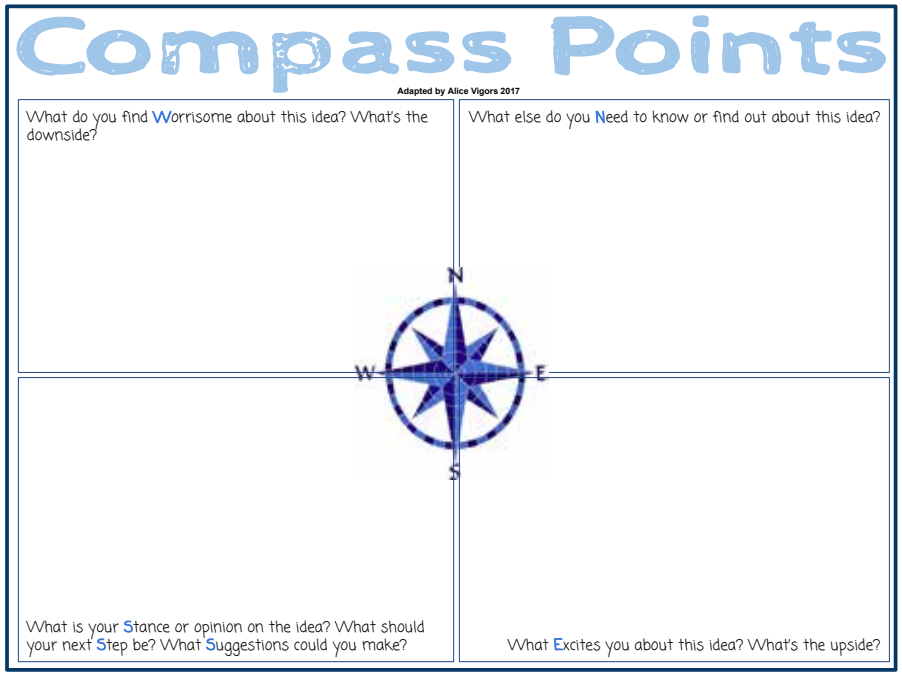
DURING

- ☐ Set boundaries: Use natural landmarks or objects, playground cones, backpacks, or water bottles.
- ☐ Allow learning on all land surfaces (grass, concrete, and dirt).
- ☐ Wear a watch or bring a timer.
- ☐ Define and assign goals and roles of students and yourself.
- ☐ Use established classroom management strategies that students are already familiar with, like Call & response, or bring a whistle to bring the group back together.
- ☐ Take your time. Start with 10 minutes outside and each visit, add a few more minutes to build student expectations.

6th grade students searching for macro-invertebrates at Reedy Creek

AFTER

- ☐ Build reflection for students as part of the activity. Use Project Zero Thinking Tools.
- ☐ Take your time. Start with 10 minutes outside and each visit, add a few more minutes to build student expectations.
- ☐ Self-reflection. Ask yourself as the teacher what went well and what you could change for next time.



Compass Points worksheet as a reflection activity

PARTNERSHIP ECOSYSTEM

An ecosystem is a community of organisms interacting with the surrounding environment. Our partnership ecosystem is a community of organizations collaborating across sectors to create an environmentally literate Richmond. This graphic defines the support, leadership, and facilitation that these partner groups provide. It should be used both to inform students and teachers, and to help partners understand their responsibilities and find where they can be most useful to driving environmental literacy in RPS. For a list of local community partners, please see the **Community Partners List.** You can enter your organization into the **RPS Community Partnership Database** found here: rvaschools.net/engagement/community-partnerships

How to keep the partner ecosystem healthy

Partnerships that last over time have the opportunity to improve through trial and error, deepening and strengthening their connections in order for educational opportunities to grow symbiotically.

The following are key strategies for partnership models that will last:

- ✓ Identify areas of need or opportunity for programming and projects
- ✓ Plan collaboratively.
- ✓ Share resources: materials, expertise, general knowledge, and best practices.
- ✓ Evaluate and assess at established intervals.

Get involved with the Richmond City School Board. The School Board meets on the first Monday of each month at 6pm. Guidance on submitting public comments and speaking in front of the School Board can be found here.

CAREGIVERS AND FAMILIES

→ Advocate to government agencies to support environmental education and sustainability policies.

→ Ask tough questions. Push elected officials to plan for your children's future.

→ Provide feedback to how well programs and curricula serve your children's needs.

→ Participate in sustainability initiatives as a family.

NON-GOVERNMENTAL ORGANIZATIONS

→ Collaborate with educators and school boards to integrate environmental topics into existing curricula or develop specialized environmental education programs.

→ Facilitate professional development workshops.

→ Provide out of school time programs related to the environment including nature clubs, eco-teams, or gardening clubs.

→ Lead and collaborate on outdoor field experiences.

→ Form coalitions and communities of practice that promote facets of environmental literacy.

→ Conduct workshops, seminars, or community events focusing on environmental issues.

A principal and community partner learning together

COMMUNITY PARTNERS LIST

Field Experience	Website	Resources they offer
Alliance for the Chesapeake Bay	allianceforthebay.org	• K-12 Environmental education and MWEE programs • Professional learning for educators • Volunteer events
Blue Sky Fund	blueskyfund.org	• Field experiences for grades 3-5 • Out of school time adventure programs for grades 6-8 • Leadership activities for grades 9-12 • All programs use outdoor spaces in and around Richmond
Capital Trees	capitaltrees.org	• Planting and maintenance of public green spaces (ex. Hotchkiss Green, The Low Line, Great Shiplock Park) • Volunteer activities
Chesapeake Bay Foundation	cbf.org/join-us/education-program/index.html	• Teacher and administrator overnight professional learning • K-12 Environmental education and MWEE programs • Summer programs for teachers and students on the water
City of Richmond Office of Sustainability	rva.gov/sustainability/about	• Community engagement events • Sustainability resources • Oversee RVAgreen2050, Climate Equity Index and the Equity Screening Tool
City of Richmond, Department of Parks, Recreation and Community Facilities	rva.gov/parks-recreation	• Adult and child recreation programs • Out of school time programs • Community and volunteer events • Summer Camps
Earth Force	earthforce.org	• K-12 Environmental action civics lessons • Funding for environmental projects • Professional learning for educators
Fit4Kids	grfit4kids.org	• K-12 Out of school time garden and wellness program and Safe Route to School program • Garden lessons and recipes • Professional learning for educators
Friends of the James River Park	jamesriverpark.org	• Volunteer engagement • Project collaboration for education initiatives • Online resources to support visits to James River Park System
Groundwork RVA	groundworkrva.org	• Green Team (high school) and Green Workforce (recent high school graduates) outdoor work experience • Volunteer opportunities at Hillside Farm and Bellemeade Community Bike Shop • Community outreach and volunteer events
Happily Natural	thenaturalfestival.com	• Happily Natural Festival held annually • Community outreach (ex.Farm tours, talks) • Volunteer opportunities at urban gardens and farms in Central Virginia
James River Association	thejamesriver.org	• Professional learning for educators • Community outreach and volunteer events • K-12 Environmental education and MWEE programs throughout the James River watershed
James River Park System	rva.gov/index.php/parks-recreation/james-river-park-system	• Professional learning for educators • Summer camps and volunteer events • Space available for self-guided field experiences • K-12 Environmental education and MWEE programs within the City of Richmond
L.O.C.A.L. Adventures	localadventuresrva.org	• Yoga and mindfulness, adventure exploration, and nature-based art out of school time programs

Field Experience	Website	Resources they offer
Lewis Ginter Botanical Garden	lewisginter.org	• Professional learning for educators • Community outreach, classes and volunteer events • PreK-12 Environmental education and garden programs
Open Space Education	openspaceed.org	• Elementary out of school time programs using nature-based art
Reforest Richmond	reforestrichmond.org	• Community events and education workshops • Volunteer tree plantings and tree giveaways to restore Richmond's urban tree canopy
Richmond Public LIbraries	rvalibrary.org	• Public and out of school time programs • Master Gardener Virtual Help Desk • Rain and pollinator gardens at certain branch locations • Free meeting spaces
Richmond Tree Stewards	richmondtreestewards.org	• Community outreach, training and education about Richmond's tree canopy and invasive species • Tree care support • Volunteer events
Science Museum of Virginia	smv.org	• K-12 Environmental education and field experiences • Online STEM lessons • Participatory Science Programs • NOAA asset: Science on the Sphere programs
The Maymont Foundation	maymont.org	• Animal interactions, nature center and Farm • Community outreach and volunteer events • PreK-12 Environmental education and historical programs
Virginia Association for Environmental Education	eevirginia.org	• Professional learning, annual conference, and various environmental resources • Nationally accredited Virginia Environmental Education Certification Program
Virginia Association of Soil and Water Conservation Districts	vaswcd.org	• Dominion Energy Envirothon high school competition • Youth Conservation Camp • Youth Conservation Leadership Institute • Student Scholarships
Virginia Department of Conservation and Recreation	dcr.virginia.gov	• State parks and public land for field experiences • Virginia Outdoors Plan • Funding through various grant programs • State level K-12 Environmental Education Strategic Plan
Virginia Department of Education	doe.virginia.gov	• Professional learning • Standards of Learning • Host of #GoOpenVA digital resource library
Virginia Department of Environmental Quality	deq.virginia.gov	• Water quality monitoring and volunteer engagement • Environmental justice resources and VA EJScreen for environmental justice-related data • Regulations and policies related to the Chesapeake Bay Act and Chesapeake Bay Watershed Agreement
Virginia Department of Forestry and Project Learning Tree Educator	dof.virginia.gov	• K-12 Environmental education lessons and summer camp • State Forest information • Professional learning for educators • Community outreach and education related to trees • Free downloadable identification guides and resources • Project Learning Tree Curriculum and training
Virginia Department of Wildlife Resources	dwr.virginia.gov	• DWR's Virginia Naturally Schools Recognition Program • K-12 Environmental education lessons • Live Streaming Wildlife Cameras • Fishing, hunting and boating information • DWR managed lands for viewing wildlife • Project WILD, Aquatic WILD and Flying WILD Curriculum and training
Virginia Master Naturalists, Riverine Chapter	riverinemn.org	• Master Naturalist training program • Guest speakers on environmental literacy topic

DISTRICT LEVEL RECOMMENDATIONS

Environmental literacy, and cultivating responsible, responsive, and informed graduates, is a shared responsibility among teachers, parents, partners, administrators, and the students themselves. The following policy and infrastructure recommendations highlight the ways in which the School District can improve the environmental landscape for students and teachers on a level that will only be possible with District administrative support and collaboration. Each of these recommendations supports the achievement and sustainability of the Goals of this ELP, and where appropriate, it aligns with other infrastructure initiatives in the City. This list should be used by administrators, teachers, and partners for that collaboration as we move toward systems-level improvements to RPS.

PERSONNEL

→ Create a sustainable position within RPS to serve as an Environmental Learning Specialist who can connect teachers across disciplines as well as act as a resource for planning schoolyard and field experiences.

FACILITIES

→ Adhere to the Recommendations as well as the requirements found in the City of Richmond's Sustainable Design Standards. Work to be a model for sustainable design for all new construction.

→ Expand Facilities Operations and Maintenance personnel to extend the longevity and improve infrastructure performance. (4.7*)

→ Designate community partners per school that share responsibility throughout the lifetime of a project to ensure its success.

→ Maximize green infrastructure, including passive water collection systems.

→ Improve energy efficiency and energy production utilizing renewable sources, including solar, wind, hydroelectricity, geothermal, and biomass. (5.2.2*)

→ Build outdoor classroom spaces as part of each newly constructed school, and add outdoor classrooms to existing schoolyards.

→ Install new and maintain existing school gardens for use by students and community members. Use these gardens as an academic teaching tool as well as an after school program.

→ Design a composting or alternative system that can reduce cafeteria waste.

→ Install and provide maintenance for personal use bottle fillers in each school building. (5.2.1.6*)

→ Start and maintain recycling pickup at schools.

TRANSPORTATION

→ Expand the RPS bus fleet to include specialized field trip vehicles not bound by the transportation schedule.This fleet should include full size buses, mini-buses, and vans.

→ Hire additional bus drivers and assign them to the field trip fleet.

→ Streamline approval process to partner with community groups to provide transportation solutions.

→ Improve connectivity between schools and communities for multi-modal transit options that are easy and pleasant to utilize. (5.4.2*)

Transportation has repeatedly been identified as a barrier to equity in field experiences and out of school time outdoor learning.

SCHOOLYARD EXPERIENCES AND FIELD TRIPS

→ Create a procedure in which parents and guardians give annual permission for all outdoor schoolyard experiences for the duration of the school year. Incorporate district-sanctioned language for students to participate in these experiences throughout the school year that includes the understanding and expectation that students sometimes get wet and dirty while learning outdoors.

→ Create a system for teachers to share information through Remind and Google Classroom in advance of an experience so that students are aware to dress for the outdoors. Parents can then opt students out of an individual activity, class, or day as needed.

MATERIALS

→ Provide materials and safety equipment to each school to support the fundamental scope of outdoor learning. These include items such as walkie talkies, first aid kits, and safety cones.

→ Systematize volunteer approval for adult chaperones to support schoolyard outdoor experiences, thus allowing other school staff to remain at their designated tasks.

→ Organize a District-wide or school-based bank of extra clothing for students who need appropriate outdoor gear for a schoolyard or field experience. Include plans for care and cleaning of these items into the planning for this clothes bank.

PROFESSIONAL LEARNING

→ Establish a micro credentialing system for teachers seeking additional training in outdoor learning, environmental literacy, environmental justice, and other related topics.

→ Allow ample time for teachers to participate in a variety of District offerings as well as other conferences, workshops and training outside of the District. Include time to debrief and process afterwards.

→ Recognize all professional learning opportunities with recertification points.

✱ Refers to specific Sustainable Design Standards (forthcoming).

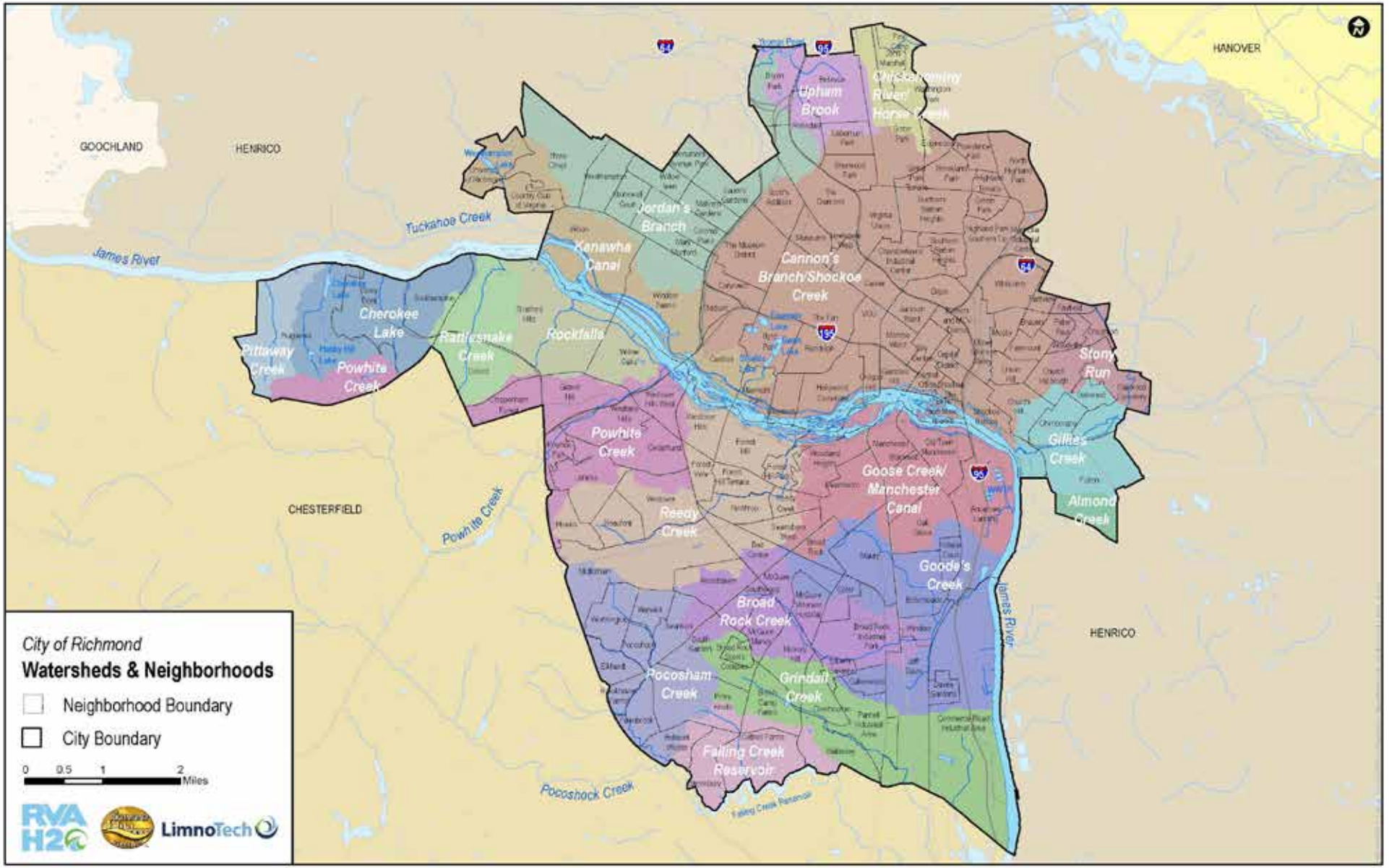
Conclusion

The Richmond Public Schools Environmental Literacy Plan is both ambitious and attainable, and it has the dream of environmental justice at its heart. This Plan is concrete; teachers, administrators, non formal educators, and families can all find elements to support their teaching and learning with no delay. This Plan centers the James River, ensuring that all RPS students have the access they deserve to the City's most treasured natural resource. For RPS, the outdoors is an essential tool for each child's development.

Dynamism is critical to the sustained relevance of this document. Review and revision should take place each time the Virginia Department of Education adopts new Science Standards of Learning, and each time RPS revises our strategic plan. Ongoing alignment with each of these guiding directives is the only way for the Plan to continue to support relevant outdoor learning.

We seek, through writing this document, both to celebrate the strength of environmental literacy work already taking place in Richmond, and to challenge ourselves to work toward greater equity across our community, greater depth in our teaching, and greater responsiveness to meet the demands of environmental literacy in the face of the climate crisis. The successful implementation of this plan will prioritize schoolyard outdoor experiences while connecting students to their larger watershed, sparking lifelong reciprocal relationships between Richmond people and the Richmond environment.

APPENDIX 1: WATERSHED AND NEIGHBORHOODS MAP



APPENDIX 2: THE RICHMOND ENVIRONMENT SURVEY ACTION ITEMS

TOP PRIORITIES AND THEMES FROM SURVEY RESULTS: **ACCESS, SAFETY, EQUITY.**

1. Collaborate with the RPS to develop accessibility plan to green spaces.

Referenced in survey:

→ Map Markers: Green Spaces I Go – How do you get there?

→ Map Markers: Green Spaces I Avoid – What barriers to access or comfort are there? & what would make it more appealing to visit?

→ Map Markers: Places I Want to Go – Are there existing barriers to access?

→ Map Markers: General comment

→ Priority Ranking: Nearby Outside Spaces (ranked the highest priority)

2. Develop safety measures and standards for access to and within green spaces that meet RPS and user needs.

Referenced in survey:

→ Map Markers: Green Spaces I Avoid – Why?

→ Map Markers: Places I Want to Go – Are there existing barriers to access?

3. Develop RPS curriculum to explore and educate in green spaces to improve environmental literacy, environmental subject knowledge, and comfort.

Referenced in survey:

→ Concept Rating: RPS Graduate – Comfort in green spaces

→ Priority Ranking

→ Concept Rating: RPS Graduate

→ Concept Rating: RPS Involvement

4. Produce a social media/communication plan for RPS and the community to maintain communication and up-to-date knowledge on what is occurring throughout the City's green spaces.

Referenced in survey:

→ Concept Rating: Communication

5. Produce equity strategies with RPS and the community to ensure green spaces are welcoming and safe for all users.

Referenced in survey:

→ Map Markers: Places I Want to Go – Are there existing barriers to access?

→ Concept Rating: RPS Involvement General Comment

6. Work with RPS to develop a sustainability strategy to improve and increase sustainability measures within the schools.

Referenced in survey:

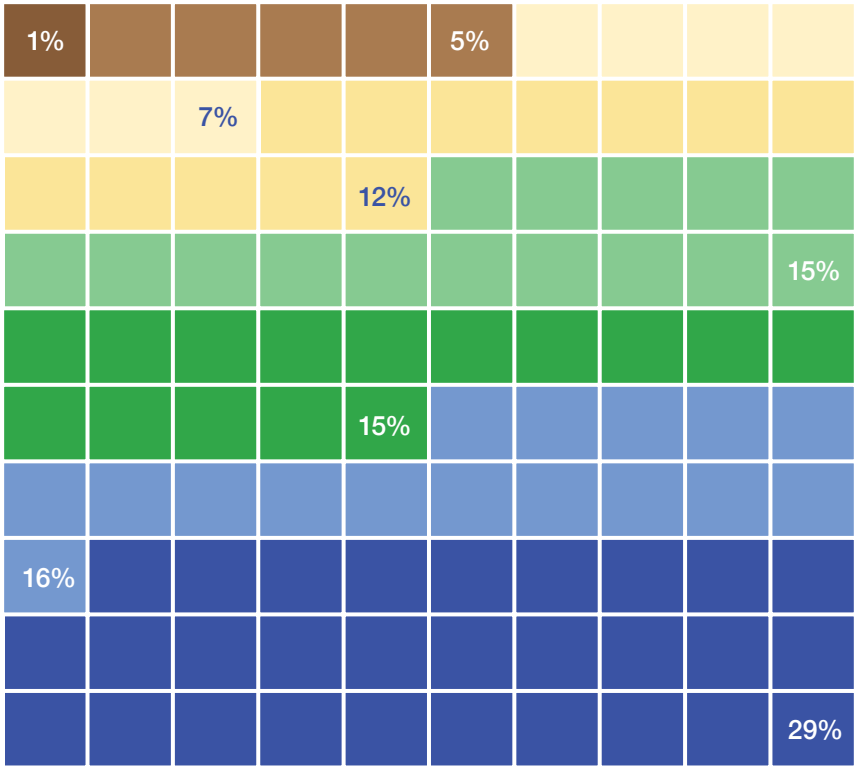
→ Concept Rating: Community Action

→ Priority Ranking

For a copy of the complete survey results, please contact Penelope.Davenport@rva.gov

APPENDIX 3: INTERVIEW THEMES

WHAT THEMES DID OUR COMMUNITY ENGAGEMENT REVEAL ABOUT ENVIRONMENTAL LITERACY?



Breakdown of interview themes

1%	Other/Misc
5%	Community influence and support
7%	Climate mitigation
12%	ELP Format Suggestions
15%	School influences/state requirements
15%	Family Influence
16%	Nature and Social issues/Addressing inequities
29%	Self and nature

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Richmond School Board

Partner Team: Richmond Public Schools Science Specialists Aimee Sobon and Wendy Just, Alliance for the Chesapeake Bay, Blue Sky Fund, and City of Richmond's James River Park System

This Plan is the result of community feedback. We are grateful to each person who spoke with us, responded to a survey, participated in a focus group, and attended a community listening session. We look forward to continuing to listen and learn from you.

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Richmond, VA