



April 2023

Dear Educators.

At Conservation Nation, we are working to save wild animals, their habitats, and our planet by building a more inclusive conservation movement. Traditionally, the path to a wildlife conservation career has been one of privilege and exclusion, and we want to change that. By investing in future leaders through education, career development, and funding, we are creating opportunities to bring more voices and more solutions to the urgent biodiversity challenges facing our planet.

Because we want every child to experience the wonders of nature, we created this comprehensive guide to help you plan meaningful nature experiences for your students in Washington, DC, where there is so much beauty to explore and enjoy outside!

SECTION 1 describes local Nature Destinations in the DC Metro area with information on activity options, costs, and contact information to help you set up field trips.

SECTION 2 provides Nature Learning Ideas & Resources including outdoor activity ideas and links to recommended nature learning websites and online apps to help you and your students get the most out of each nature learning experience.

SECTION 3 includes printable Nature Journal & Activity Pages to help you plan field trips at any nature destination. These include reflection pages and "Nature Detective" scavenger hunts for students of all ages.

This guide will be updated yearly, and we invite you to give us feedback on the last page.

Enjoy!

Diane Lill Director of Education





The Conservation Nation Academy inspires teachers and their students to cultivate a sense of belonging in nature, explore a conservation mindset, and see themselves as conservation champions. We provide teachers with fun and hands-on lessons that feature interactions with counter-stereotypical role models from our network of Conservation Nation grantees, fellows, and partners. Our curriculum challenges stereotypes by highlighting relatable and authentic conservation champions from around the world who come from diverse cultural, racial, and ethnic backgrounds and communities that have long been underrepresented in conservation. You can sign up here or use the QR code to join our Conservation Nation Academy mailing list, receive information on how to access our lesson materials, and indicate your willingness to test new lessons as they are available and give us feedback

Learn more about Conservation Nation at www.conservationnation.org.

Table of Contents

Map of Featured Destinations	4
Guide to Choosing Your Nature Experience	5
Section 1: Nature Destinations	6
Nature Near You: Local Park Visit	7-9
Anacostia Park & River	10-13
Bladensburg Waterfront Park	14-17
Kenilworth Aquatic Gardens	18-20
Kingman Island	21-23
Potomac River	24-25
Rock Creek Park	26-28
Smithsonian's National Zoo	29-30
The Well at Oxon Run	31-33
US Botanic Garden	34-35
US National Arboretum	36-38

Section 2: Nature Learning Ideas & Resources	39
Nature-based Outdoor Activity Ideas	40
Nature Learning Resources & References	41
Section 3: Nature Journal & Activity Pages	42
Nature Log	43
See, Think, Wonder: Plant Exploration	44
See, Think, Wonder: Animal Exploration	45
Forest or River Exploration	46
Nature Scavenger Hunts	47-50
Feedback and Acknowledgements	51





FEATURED NATURE EXPERIENCES



FOREST OR PARK EXPERIENCE

Local Park Visit

Rock Creek Park NW



PLANT EXPERIENCE



The Well at Oxon Run

US Botanic Garden SW

US National Arboretum NE



ANIMAL EXPERIENCE



AREC Center, Anacostia Park SE

Smithsonian National Zoo NW



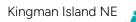
RIVER & WATERSHED EXPERIENCE



Anacostia Park & River SE

Bladensburg Waterfront Park NE

Kenilworth Aquatic Gardens NE



Potomac River Boat Tour SW

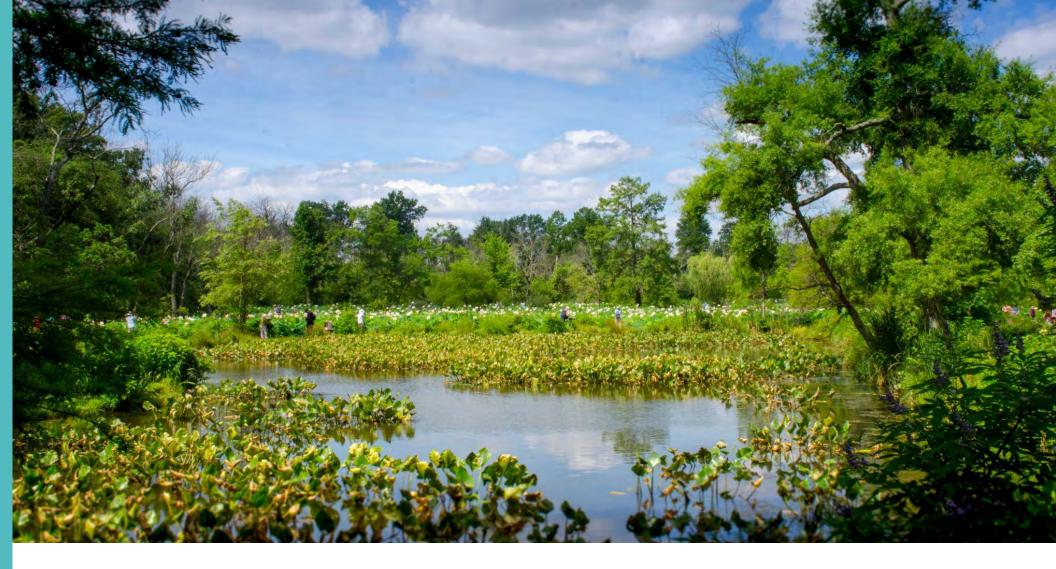




Choose Your Nature Experience

US National Arboretum p36 (Staff-Supported visit)

TEACHER EFFORT SCALE: DESTINATION CATEGORIES: LOW = book trip with organizer, show up and enjoy the tour! FOREST OR PARK EXPERIENCE MEDIUM = easy to plan and lead with provided materials ANIMAL EXPERIENCE PLANT EXPERIENCE HIGH (for the motivated teacher) = higher effort needed to plan and lead, but lots of room for creativity and RIVER & WATERSHED EXPERIENCE customization! **SELF-GUIDED EXPERIENCE** Nature Near You: Local Park Experience p7 Anacostia Park & River p10 Bladensburg Waterfront Park p14 Kenilworth Aquatic Gardens p18 Kingman Island p21 Rock Creek Park p26 Smithsonian's National Zoo p29 US Botanic Garden p34 US National Arboretum p36 **EDUCATOR-LED EXPERIENCE** Nature Near You: Local Park Experience p7 Anacostia Park & River p10 Bladensburg Waterfront Park p14 Kenilworth Aquatic Gardens p18 Kingman Island p21 Potomac River p24 The Well at Oxon Run p31 US Botanic Garden p34



Section 1: Nature Destinations

Find information on local nature destinations in the Washington, DC Metro area including highlights of the experience, field trip planning information, and destination-specific resources to help students get the most out of their nature experience.

Nature Near You: Experience Neighborhood Parks and Green Spaces

Location: Any nearby green space

When to visit: Anytime! Ideally at least once per season (fall, winter, spring,

summer)

Visit options: Self-guided or

Naturalist-led field trips

LEARNING OBJECTIVES

Discover a nature destination close to school that students can visit regularly

Observe how a local nature spot changes through the seasons

Learn & Practice observation skills using all the senses

Appreciate that you don't have to go far to find nature

ACTIVITY OPTIONS

SELF-GUIDED NATURE WALK at or near school

NATURALIST-LED EXPERIENCE such as a tree lesson & walk in a nearby park

THE NATURE NEAR YOU EXPERIENCE is all about finding a nature spot close to school that students can visit often and easily. Nature is everywhere, so you don't have to travel far to find it or experience it! Visiting the same nature space regularly (once a season or at least twice a year) is a great way to observe how plants, animals, and natural cycles change through the year. Every visit will be a different experience if students are watching closely. In this experience, teachers can lead their own local nature experience using the resources listed on the next page, or they can arrange for a naturalist to support them in an outdoor experience close to school.









Did you know Washington, DC has an official tree? It's the scarlet oak (Quercus coccinea). The scarlet oak is beloved for its bright red fall color and its acorns, which are a favorite food of gray squirrels, chipmunks, deer, and a multitude of birds, especially blue jays!

Grade Levels: PreK-12

Activity Options:

- Self-guided nature walks using resources and activity pages provided in this guide
- Naturalist-led outdoor programs at school, in the neighborhood, or at a nearby green space

When to Visit: Any day, any time, any weather! Cost: Varies by program (FREE to \$4 per person)

Location & Transport: Walking is best!

Accessibility: Varies by location

Max Capacity: Any number of students you feel comfortable leading

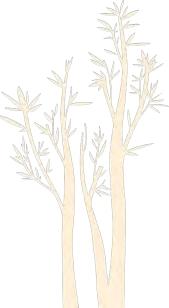
Restrooms: Varies by location

Lunch/Snack Options: Varies by location

Teacher Effort Required: LOW to book naturalist-led field trip listed on the next page and HIGH to plan & lead self-guided nature walk using the resources in this guide and

Contact: Varies by activity (see Details & Resource Links section)





DETAILS & RESOURCE LINKS FOR 2023

Outdoor Education Trainings & Guides for Teachers

Guide to Outdoor Learning: A Resource for Schools & Communities by Urban

Adventure Squad: This online guide includes recommendations on how to pick a destination and plan safety measures, logistics, lunch arrangements, weather management, communication with parents, etc.

Project Wild Professional Development Training by Aquatic Resources Center:

In-person & online workshops on how to teach outdoors. Choose from 3 programs noted below. Public sessions occur periodically (min 5 teachers required). FREE to all teachers in the greater DC Metro area. Contact Kalie Johnson at 202-440-2731 or kalie.johnson@dc.gov.

- Growing Up Wild: Preschool Training on general outdoor learning (3 hr program)
- Project Wild Program: Terrestrial Guide for Grades K-12 (6 hr program)
- Aquatic Wild Program: Aquatic Guide for Grades K-12 (6 hr program)

See Other Useful Resources on the next page.

Information For Self-Guided Experience

Lead your students on a nature walk at school or in the neighborhood using the resources listed below or in Sections 2 and 3 of this guide. Returning to the same place several times a year is recommended so students can observe the seasonal changes.

Where to go: Any outdoor green space at or near school

What to bring and do: (source: <u>UAS Guide to Outdoor Learning</u>, 2023)

- Wear sturdy shoes, dress in layers and anticipate cold, wet, and hot weather.
- Bring and use a map or guide.
- Stay hydrated: bring and drink water. And bring snacks for longer hikes.
- Stay on the trail to avoid poison ivy, snakes, and ticks.

Materials & Resources

- Urban Forestry Scavenger Hunt (English & Spanish versions) by the Urban Forestry Division (All Ages)
- Tree Bingo K-2 & Tree Bingo 3-5 by Casey Trees
- Simple Outdoor Nature Activity Ideas listed on p34 of this guide
- Online Apps for plant and animal identification (recommended for ages 8+)
- o **SEEK** by iNaturalist for animals, plants & fungi
- o Merlin by Cornell Ornithology Lab for birds
- o <u>Creek Critters</u> by Nature Forward for small freshwater organisms
- o Picture This for plants, birds, and insects
- o Find Your Park website to find the closest National Park



KASEY YTURRALDE FOREST HEALTH AND COMMUNITY **OUTREACH SPECIALIST, URBAN** FORESTRY DIVISION, DISTRICT DEPT. OF TRANSPORTATION

"We love to share our passion for trees with students and teachers, and hope our work inspires future arborists, urban foresters and neighborhood tree stewards."



P43 NATURE LOG P44 PLANT EXPLORATION P45 ANIMAL EXPLORATION P46 FOREST OR RIVER EXPLORATION

DETAILS & RESOURCE LINKS FOR 2023

Information on Naturalist-led lessons

- Urban Forestry School Visit (Grades PreK-12): Tree education program led by an urban forester includes a 30-45 minute lesson about the benefits of trees, their needs, and how foresters and the local community can support a healthy urban forest. Experience can include tree plantings at schools. Maximum capacity: up to 25 students. Cost: FREE. Contact: Kasey Yturralde at dc.trees@dc.gov or 202-671-5133.
- Nature Near Schools Program (Grade 4 only): A variety of naturalist-led outdoor nature programs on different topics includes tree education programs by Casey Trees, outdoor learning field trips by Urban Adventure Squad, schoolyard greening & nature audits by Living Classrooms, and watershed education programs by the Anacostia Watershed Society. Cost: FREE with priority given to Title 1 schools. Contact: Adrienne Farfalla, adrienne.farfalla1@dc.gov or 202-697-1112 or Trinh Doan, patricia.doan@dc.gov.
- PG Parks Outdoor Nature Discovery Programs (Grades PreK-12): Naturalist-led program includes nature discovery walks in green spaces at or near schools. Available to DC & Prince George's County schools. Cost: \$4 per person with minimum \$65 program fee. Contact bladensburgwp@pgparks.com or 301-779-0371.

OTHER USEFUL & RELATED RESOURCES

- Plant ID Games (Grades 4+): online game by the Alice Ferguson Foundation for students to practice identifying local trees, vines, shrubs and herbaceous plants in the field. Suitable for phone or tablet.
- Fishing for a Name (Grades 4+): online game by Alice Ferguson Foundation for students to practice identifying different types of local fish in the field, Suitable for phone or ipad use.
- NGSS-Aligned PreK-5 Environmental Literacy Guide: Outdoor activity ideas at school, in the neighborhood, or on off-site field trips by OSSE (Office of State Superintendent of Education)

Anacostia Park & River: Experience a River and its Watershed

Location: Southeast DC

When to visit: Open year-round (Best seasons: spring & fall)

Visit options: Self-guided or Naturalist-led field trips

LEARNING OBJECTIVES

Explore the Anacostia River by boat, bike, or on foot

Discover local aquatic life

Learn about river systems and the aquatic animals of the local watersheds

Understand how activities in the watershed affect plants, animals, and people

Participate in fishing clinics or restoration projects to improve river health

ACTIVITY OPTIONS

SELF-GUIDED EXPERIENCE includes visit to the Aquatic Resources Education Center and nature walk along the Anacostia River

STAFF-LED TOURS including boat tours, fishing clinics, and hands-on activities at the Aquatic Resources Education Center as well as restoration activities at the river **ANACOSTIA PARK** is a destination where students can enjoy a wide range of nature experiences. Outdoors, they can tour the Anacostia River by boat, learn to fish, help with river restoration projects, or enjoy walking along the Anacostia River Trail. Indoors, they can explore the wonderful Aquatic Resources Education Center (AREC), the District's only free education center/aquarium featuring local species of fish, amphibians, and reptiles.

The Anacostia River watershed was originally home to the Nacotchtank Indians who lived, farmed, hunted and traded there until the arrival of the Europeans in the 1600s. As the Europeans started farming and building in the watershed, the river became polluted and began to fill up with sediment. That sediment was later used to fill in natural wetlands to create parks & recreation areas such as Anacostia Park. Despite pollution and trash, the river supports many plants and wildlife. This expansive open park on the banks of the Anacostia River is a great place to learn about rivers and watersheds and how human activities impact everything that lives in the watershed.









TERESA RODRIGUEZ WILDLIFE BIOLOGIST at AREC

> "My favorite aquatic animal of the Anacostia is the common snapping turtle because it lives a very long time and has adapted to many different habitats. People can see Snappy, a live common snapping turtle, at the AREC aquariums!"

Grade Levels: PreK-12

Activity Options:

- Self-guided Tour of AREC using AREC-provided activity book and Nature Walk on the Anacostia River Trail using the resources provided in this guide (1-2 hrs)
- Guided Boat Tours & Fishing Clinics (1 hr)
- Staff-led field trips include indoor tour & hand-on activities at AREC aquarium and naturalist-led outdoor restoration projects

When to Visit: Open daily until sunset (best seasons: spring and fall)

Cost: FREE in 2023 (teacher arranges transport)

Location & Transport:

- 1500 Anacostia Drive SE, 20020
- School bus drop-off and parking next to AREC & skating pavilion
- Bike access from Anacostia River Trail
- Boat access from Anacostia River boat ramp
- Closest Metro:
- Potomac Ave (Orange/Blue Lines) `+1.2-mile walk to AREC
- Anacostia (Green Line) + 5-min walk to NPS Offices & 1 mile (20 min) walk to AREC

Accessibility: Anacostia River Trail is paved and wheelchair accessible, and boat tours are generally wheelchair accessible. See program information for details and additional language translation services that may be available.

Maximum Capacity: Varies with activity

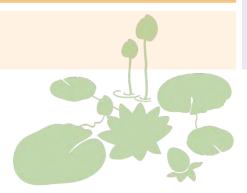
Restrooms: Available at AREC

Lunch/Snack Options: Outdoor picnic tables next to AREC

Teacher Effort Required: LOW to book ahead & organize transport for naturalist-led field trip and MEDIUM to lead self-quided tour with materials provided in this guide

Contact: Varies by activity

(see Details & Resource Links section)



DETAILS & RESOURCE LINKS FOR 2023

Anacostia Park Visit Information Reservations not required for self-guided visit of park; contact organizations listed below to visit AREC & book naturalist-led programs

National Park Service App: Interactive maps and basic information for visiting Anacostia Park or any national park

Anacostia Park Visitor Map

Summary of Visit Options

Self-Guided tour of the Aquatic Resources Education Center (AREC) and Nature Walk on the Anacostia River Trail: See the fish, amphibians and reptiles of the Anacostia River up close at AREC and walk along the Anacostia River using a trail map and the Nature Detective Scavenger Hunts in this guide. (Grades PreK-12)

Guided boat tours by Anacostia Riverkeeper & Anacostia Watershed Society include information on the history, challenges, and restoration of the Anacostia River (Grades PreK-12). See specific program details in the Naturalist-Led Program section.

Tour of AREC Aquariums by AREC staff introduce students to the aguatic life of the Anacostia River. Optional hands-on indoor or outdoor activities also available. (Grades 1-5)

Mussel Power & Shad Restoration Programs led by educators from the Anacostia Watershed Society introduce students to the role of freshwater mussels and the native American Shad fish in the Anacostia River Watershed. (Grades 3-8)

Bridging the Watershed Program led by educators from the Alice Ferguson Foundation covers various topics related to the Anacostia River including water quality, pollution, watershed restoration, and sustainability approaches. (Grades 6-12)

DETAILS & RESOURCE LINKS FOR 2023

Information for Self-Guided Tour

Start with a tour of the Aquatic Resources Education Center using the activity book that is available on-site. AREC is open to groups Tu-Fr 10am-noon & 1-3pm; max capacity 25-35 students with 2-3 accompanying adults. Contact Kalie Johnson at kalie.johnson@dc.gov. or 202-440-2731. (~1 hr)

Then head outside for a nature walk along the Anacostia River Trail which runs in front of the nature center. You can walk in either direction and explore the river using the resources listed below.. (~1 hr)

Picnic tables, playground, and the park grounds are available outside AREC for outdoor snack/lunch and free play after your nature walk.

Materials & Resources

- 1. Aquatic Resources Education Center Activity Book (Grades 4+): Available for pick up upon arrival at AREC.
- 2. Map for Anacostia Water Trail walk
- 3. Nature Detective Scavenger Hunt activity pages included on p47-50 & Outdoor Activity Ideas on p40 of this guide. (Grades PreK-12)
- 4. Online Apps for plant and animal identification listed on p41 of this guide (recommended for ages 8+)



Information on Naturalist-led programs:

Anacostia Riverkeeper Boat tour (All Ages): 1-hr guided boat tour highlights the history, threats to, and restoration of the Anacostia River. Launch points are the Anacostia Park boat ramp near the Aquatic Resources Education Center (to explore the upstream part of the river which is closer to its natural state) & Yards Park Marina (to explore the more developed downstream part of the river). Tours operate Apr-Oct, Mon-Sat; maximum capacity is 15-21 people per boat. The Anacostia Riverkeeper boat is accessible to non-motorized wheelchair users. Accommodations available for ASL, Spanish, and other translation needs by request. Cost: FREE (teacher arranges transport). Contact info@anacostiariverkeeper.org or 202-863-0158 or use Teacher signup form.

Aquatic Resource Education Center (AREC) Tour (Grades PreK-12): Guided 40 min tour + 45 min indoor or outdoor activity allows students to see native and invasive fish, amphibians, and turtles in the center's aquariums; AREC lessons are DCPS Science curriculum-aligned and cover a variety of topics related to local watersheds and aquatic species. Outdoor activity options also include boating and fishing activities. AREC is open Tu-Fr 10am-noon & 1-3pm; maximum capacity is 25-35 students with 2-3 accompanying adults. Cost: FREE (teacher arranges transport). Contact Kalie Johnson at kalie.johnson@dc.gov or 202-440-2731 or use the AREC teacher signup form.

Anacostia Watershed Society Shad Restoration Program (Grades 3-8, offered Mar-May) Students learn about efforts to restore the Anacostia River's American Shad fish population by hatching and raising shad eggs in the classroom and releasing the juveniles into the river. This program includes a classroom visit, a field trip at Anacostia Park to release the shad fry, and a boat tour on the river. Maximum capacity 50-80 students with adult chaperones, divided into smaller groups. Cost: FREE including transport if needed. Contact Kendra Bierman at kbierman@anacostiaws.org or submit the Teacher Sign-up on the AWS Teacher Resources webpage.

Alice Ferguson Foundation Bridging the Watershed Program (Grades 6-12):

3-5-hr educator-led field trips on the various watershed topics include trash, invasive species, water quality and sustainability. Cost: FREE to teachers who participate in a virtual or in-person training workshop. Contact education@fergusonfoundation.org.

OTHER USEFUL & RELATED RESOURCES

Other Useful & Related Resources

Introduction to Anacostia River: 2-minute introductory video to the river by Anacostia Riverkeeper (suitable for all ages)

Anacostia River Explorers Virtual Boat Tour: This video series by Anacostia Riverkeeper is a good way for teachers to familiarize themselves with the Anacostia River and the various topics students can learn about. View the full 50-minute video discussing the environmental and cultural history of the Anacostia River OR learn about each segment of the river by clicking on the boat icons on the map under "Interactive boat tour" at the bottom of the webpage.

Anacostia River Watershed Plant & Animal Downloadable Field Guide (English Version and Spanish Version) (Grades 4+): Simple field guide with photos of plant and animal species commonly found in the Anacostia River Watershed

Trace a Watershed Classroom Activity (Grades 6+): Exercise by Anacostia River Watershed Society for students to trace Anacostia Watershed boundaries on a map

Swim for Your Life (Grades 6+): online game by Alice Ferguson Foundation to help students learn about the journey and survival rates of migratory fish from birth to adulthood and spawning

Macroinvertebrate ID Activity (Grades 4+): online game by the Alice Ferguson Foundation for students to practice identifying Macroinvertebrates. This is a good activity for students to do BEFORE they go on a field trip investigating stream and river health.







NATURE JOURNAL REFLECTION PAGES

P43 NATURE LOG P45 ANIMAL EXPLORATION P46 RIVER EXPLORATION



Bladensburg Waterfront Park: Experience a River and its Watershed

Location: Bladensburg, MD

When to visit: Year-round (Best seasons: spring and fall)

Visit options: Self-guided or Naturalist-led field trips

LEARNING OBJECTIVES

Explore the Anacostia River on a boat or along the walking/biking trail

Understand the concept of a watershed and how human activities can help or harm plants and animals in the watershed

Learn the story of the Anacostia River and its relationship with the people, plants, and animals that live in and alongside it

Participate in restoration projects to improve watershed health

ACTIVITY OPTIONS

SELF-GUIDED NATURE WALKS on the waterfront or the Anacostia River Trail **NATURALIST-LED FIELD TRIPS** including guided boat tours, nature discovery walks, and restoration activities



BLADENSBURG WATERFRONT PARK is a destination where students can experience the Anacostia River by boat or on the walking trail. The Anacostia River was originally home to the Nacotchtank, or Anacostans, who lived, farmed, hunted and traded by the river until the arrival of the Europeans in the 1600s. As the Europeans started farming and building in the watershed, the river became polluted and filled with sediment. That sediment was later used to create parks and recreation areas. The last 50 years have seen many efforts to restore and protect the Anacostia River. Today students can visit this nature destination to learn how human activities impact everything that lives in the watershed









The port of Bladensburg was a bustling trade hub for large vessels in the 1800s. The depth of the river there used to be 40 feet. But through erosion from tobacco farming and the destruction of wetlands, the depth is now as low as 3 feet.



Grade Levels: PreK-12

Activity Options:

- Self-quided nature walks at the Waterfront Park or on the Anacostia River Trail (1-2 hrs)
- Naturalist-led boat tours, outdoor discovery walks, and restoration activities (1-4 hrs)

When to Visit: Year-round (best season: spring or fall)

Cost: Varies by program ranging from FREE to \$5 per person (teacher arranges transport)

Location & Transport:

- 4601 Annapolis Rd, Bladensburg MD 20710
- School bus drop-off and parking onsite
- Bike access from Anacostia River Trail
- Boat access at Bladensburg Waterfront dock
- Closest bus stop: Annapolis Road at 46th St + 5 minute walk

Accessibility: Paved trails & boat tours are wheelchair accessible; Support for vision & hearing-impaired visitors (program dependent)

Maximum Capacity: Varies by activity (see Details section)

Restrooms: Available next to park office at waterfront and next to picnic pavilion

Lunch/Snack Options: Covered picnic tables in pavilion (advance reservation required)

Teacher Effort Required: LOW to book ahead & organize transport for naturalist-led trips and MEDIUM to lead self-guided walks using materials provided in this guide

Contact: FOR ALL GROUP VISITS

Call 301-779-0371 or email bladensburgwp@pgparks.com

Reservations strongly recommended for self-guided visits to ensure bus parking and availability of picnic tables. For naturalist-led programs, contact organizations listed on the next page.

DETAILS & RESOURCE LINKS FOR 2023

General Information on Bladensburg Waterfront Park

Visitor Map

Summary of Visit Options

Self-quided nature walks at the Waterfront Park or on the Anacostia River Trail using trail map & outdoor activity ideas provided in this guide. (All Ages)

Guided Boat tours offered by Bladensburg Waterfront Park & Anacostia Watershed Society provide information on Anacostia River history, wildlife, challenges, and restoration. (All Ages)

Bladensburg Waterfront Park Nature Programs are naturalist-led field trips which include outdoor discovery walks and classroom ecology lessons. (Grades PreK-12)

Anacostia Watershed Society Outdoor Education & Restoration Programs are naturalist-led field trips offering students an opportunity to participate in watershed restoration activities at the Anacostia River. Program options include the SONG Meadow Restoration Program for grades 1-12; Rice Rangers for grades 4-8; Mussel Power for grades 2-8; and the Shad Restoration program for grades 3-8.

Information for Self-Guided Visit

Lead your students on a Nature Discovery walk at the Waterfront or on the Anacostia River Trail. Pick up the paved trail behind the Bladensburg Waterfront Park office and continue south towards Washington DC/Kenilworth Aquatic Gardens. You can explore the river using the resources listed below. Picnic tables and play areas (including a small playground) are available at the Waterfront for snacks/lunch and outdoor play.

Recommended Resources & Materials

- 1. Map for Anacostia Water Trail walk
- 2. Nature Detective Scavenger Hunt activity pages included on p47-50 & Outdoor Activity Ideas on p41 of this guide. (Grades preK-12)
- 3. Online Apps for plant and animal identification listed on p41 (Suitable for ages 8+)





ANACOSTIA WATERSHED SOCIETY

"My previous experience was mostly in biodiversity conservation in my home country of Costa RIca. Here in the Anacostia River watershed, a lot of the efforts are for restoration of degraded areas. Being part of these efforts in one of the major metropolitan areas of the US, learning about the local biodiversity, and venturing into new exciting projects like freshwater mussel propagation has made this a truly unique experience for me."



DETAILS & RESOURCE LINKS FOR 2023 (continued)

Information on Naturalist-led Tours

Bladensburg Waterfront Park Boat Tours & Outdoor Nature Programs: Naturalist-led half day field trips include boat tour and outdoor/indoor ecology lessons. Teachers can choose one or both of the following programs:.

- River Boat Tours (Grades preK-12): 45-min guided natural history tour of the upper third of the river. Lessons on Animal Characteristics & Adaptations (Grades PreK-5) or Wetlands & Watersheds (Grades 5+) can be taught on boat for an extra fee.
- Outdoor Nature Programs (Grades PreK-12): Discovery Walks (Grades Prek-4) and Ecosystem Explorers Walks (Grades 5+) introduce students to the flora and fauna of the Anacostia. Classroom lessons can be taught in tandem with the nature walk. Topics include Animals Characteristics & Adaptations (Grades PreK-5), Water & You (Grades 1-5), Geology Rocks & Minerals (Grades 4-5), Plants, Cycles & Interactions (Grades 4-6), Weather, Meteorology & Climate (Grades 4-8), and Wetlands & Watersheds (Grades 3-12).

Programs run Apr-Oct. Cost: \$4 per person for boat tour OR program, and \$5 per person for program taught on boat (\$50 minimum program fee.) Spanish-speaking educators available, and programs can be adapted for vision and hearing-impaired visitors. To book program, call 301-779-0371 or email bladensburgwp@pgparks.com.

Anacostia Watershed Society Boat Tours & Outdoor Education Programs: AWS runs four school programs offering different watershed experiences at Bladensburg Waterfront Park:

- Mussel Power Program (Grades 2-8 for DCPS schools & Grades 9-12 for PGCPS schools, offered Jan-Jun) Students learn about the importance of freshwater mussels in the Anacostia River by raising mussels in the classroom and then releasing them into the river.
- Rice Rangers Wetland Restoration Program (Grades 4-8, offered Sep-Nov) Students learn about the importance of wetland plants by growing wild rice in the classroom and planting it in the mudflats of the Anacostia River.
- Shad Restoration Program (Grades 3-8, offered Mar-May) Students learn about efforts to restore the Anacostia River's native American Shad fish population by hatching and raising shad eggs in the classroom and releasing the juveniles into the Anacostia River.
- SONG Meadow Restoration program (Grades 1-3, offered Sep-Nov) Students learn about the importance of meadow habitat to wildlife by collecting and planting native wildflower seeds to restore meadows along the Anacostia River.

All programs include a classroom visit, a field trip at Bladensburg Waterfront Park and a boat tour on the Anacostia River. Maximum capacity 50-80 students with adult chaperones, divided into smaller groups. Cost: FREE including transport if needed. Contact Kendra Bierman at kbierman@anacostiaws.org or submit the Teacher Signup form on the AWS **Teacher Resources** webpage.

OTHER USEFUL & RELATED RESOURCES

Introduction to Anacostia River: 2-minute introductory video to the river by Anacostia Riverkeeper (suitable for all ages)

Bladensburg Waterfront Park Boat Tour: 15-minute video introduction to the Anacostia River and Bladensburg Waterfront Park, wildlife and surrounding landscapes as experienced by boat.

Anacostia River Explorers Virtual Boat Tour: This video series by Anacostia Riverkeeper is a good way for teachers to familiarize themselves with the Anacostia River and the various topics students can learn about. View the full 50-minute video discussing the environmental and cultural history of the Anacostia River or learn about each segment of the river by clicking on the boat icons on the map under "Interactive boat tour" at the bottom of the webpage.

Anacostia Riverkeeper Publications on Anacostia River Health including study on microplastics in the River

Anacostia River Watershed Plant & Animal Downloadable Field Guide (English Version and Spanish Version) (Grades 4+): Simple field guide with photos of plant and animal species commonly found in the Anacostia River Watershed

Trace a Watershed Classroom Activity (Grades 6+): Exercise by Anacostia River Watershed Society for students to trace Anacostia Watershed boundaries on a map.

Swim for Your Life (Grades 6+): online game by Alice Ferguson Foundation to help students learn about the journey and survival rates of migratory fish from birth until to adulthood and spawning

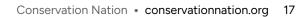
Macroinvertebrate ID Activity (Grades 4+): online game by the Alice Ferguson Foundation for students to practice identifying Macroinvertebrates. This is a good activity for students to do BEFORE they go on a field trip investigating stream and river health.







P46 FOREST OR RIVER EXPLORATION



Kenilworth Aquatic Gardens: Experience a Wetland

Location: Northeast DC

When to visit: Year-round (Lotus blooms can be seen in Jun-Aug and

water lilies late Apr-Sep)

Visit options: Self-guided, NPS Park Ranger-led or Educator-led tours

LEARNING OBJECTIVES

Observe a wetland habitat and the plants and animals it supports

Participate in ecosystem monitoring and restoration projects

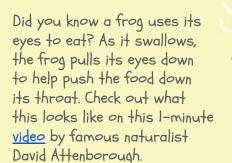
Understand how activities in the watershed affect plants, animals, & people

Learn about community-based restoration efforts and the rich cultural history of the area

ACTIVITY OPTIONS:

SELF-GUIDED NATURE WALK using the Friends of Kenilworth Aquatic Gardens Scavenger Hunts and lesson plans. Self-guided visits can include a brief introduction by NPS Park Ranger.

STAFF-LED TOURS include NPS Ranger-led programs to learn about aquatic plants, animals, and the Anacostia River as well as educator-led watershed programs & restoration activities KENILWORTH AQUATIC GARDENS is a wonderful and easily navigated nature destination for student to explore a wetland ecosystem. It is known as one of the best places in the DC Metro area to see wildlife, especially birds. Students will have a chance to see the garden's famous lotus and lily ponds which bloom in the summer, walk through the freshwater tidal marshes which are a habitat to many birds and aquatic animals, and view the Anacostia River on the river trail. It is a great place to discuss how humans impact ecosystems both through development and restoration activities. This nature destination offers an easy self-guided field trip and a variety of staff-led science and environmental education programs for a wide range of age groups. Students can also learn about local Native American history and civil rights history in the context of the community efforts to protect and restore the marsh and the river.











Grade Levels: PreK-12

Activity Options:

- Self-guided walk & activities using Friends of Kenilworth scavenger hunt & lesson plans for PreK-4 (1-2 hrs)
- NPS Ranger-led programs and Educator-led watershed programs by Anacostia River Watershed & Alice Ferguson Foundation (2-5 hrs)

When to Visit: Year-round, open daily 8am-4pm

(lotus blooms in June & July)

Cost: FREE in 2023 (teacher arranges transport)

Location & Transport:

- 1550 Anacostia Ave NE, 20019
- School bus drop-off & parking in main parking lot
- Bike access from Anacostia River Trail
- Closest Metro: Deanwood (Orange Line), 10-minute walk to entrance

Accessibility: Parking lot has handicapped spaces. Main entrance, pond trail, and Anacostia River trail have pea gravel surface. Walking trails are NOT paved and may be uneven.

Max Capacity: Varies by program

Restrooms: Available next to Visitor Center

Lunch/Snack Options: Outdoor picnic tables near Visitor Center

Teacher Effort Required: LOW to book ahead & organize transport for staff-led programs and **MEDIUM** to lead self-guided tour with provided resources from Friends of Kenilworth Aquatic Gardens

Contact: Varies by program (see Details & Resources Section)



DETAILS & RESOURCE LINKS FOR 2023

Kenilworth Park Visit Information

Visitor Map

National Park Service App: interactive maps and basic information for visiting Kenilworth Aquatic Gardens and any other National Park

Summary of Visit Options

Self-guided visit with brief introduction by a Park Ranger.

NPS Park Ranger Programs highlighting the plants, animals, and ecosystem of the park. (Best suited for Grades 3-5)

Anacostia Watershed Society Outdoor Education Programs introduce students to watershed restoration activities in the Anacostia River ecosystem. (Grades 2-8)

Bridging the Watershed Program led by educators from the Alice Ferguson Foundation on various topics. (Grades 6-12)

Information for Self-Guided Visits

Explore the gardens and wetlands on the boardwalk trail using printable scavenger hunts, nature guides, and lesson plans from the <u>Friends of Kenilworth Aquatic Gardens</u> website. Reservations are required by calling Visitor Center at 202-692-6080. (1-2 hrs)

Materials & Resources

Land Acknowledgement Video (All Ages): <u>5-minute video</u> on Native American history at Kenilworth Gardens

<u>Scavenger Hunt at Kenilworth Gardens</u> (All Ages): Simple picture card with 10 plants and animals for students to find in the gardens (*pick up at Visitors Center OR print or download beforehand on phone or iPad*)

<u>Plant, Bird & Animal Guides</u> (All Ages): Easy-to-use picture cards help students identify species in the gardens (*print or download beforehand on phone or iPad*)

Pre, On-Site & Post Field Trip Lesson Plans (Grades PreK-4): NCSS-aligned activities

- Preschool-K: What Animals Need to Survive
- Gr 1: Plants & Structure
- Gr 2: Diversity of Life in Habitats
- Gr 3: Animal Adaptations
- Gr 4: Plant Structures & Functions

DETAILS & RESOURCE LINKS FOR 2023

Information on NPS Ranger Programs & Other Educator-Led Programs

NPS Ranger-Led Programs (Grades K-12, offered year-round):

Programs cover a variety of science and environmental topics including:

- Plant reproduction & adaptations for students in grades 3-5 (4 hr max)
- Anacostia River and watershed for students in grades 3-5 (2-4 hrs)
- Macroinvertebrates (pond dipping) for all age groups (2- 3 hrs)

Maximum capacity 60 students with adult chaperones. Cost: FREE (teacher arranges transport). Contact Kenilworth Visitors Center at 202-692-6080 to reserve (Ward 7 & 8 schools given priority.)

Anacostia Watershed Society Outdoor Education Programs: AWS runs two school programs at Kenilworth Aquatic Gardens:

- Mussel Power Program (Grades 2-8 for DCPS schools & Grades 9-12 for PGCPS schools, offered Jan-Jun) Students learn about the important role of freshwater mussels in the Anacostia River by raising mussels in the classroom and then releasing them into the river.
- Rice Rangers Wetland Restoration Program (Grades 4-8, offered **Sep-Nov)** Students learn about the importance of wetland plants by growing wild rice and planting it in the mudflats of the Anacostia River.

Both programs include a classroom visit, a field trip at Kenilworth to release mussels or plant rice, and a boat tour on the Anacostia River. Maximum capacity 50-80 students with adult chaperones, divided into smaller groups. Cost: FREE including transport if needed. Contact Kendra Bierman at kbierman@anacostiaws.org & submit the Teacher Signup form on the AWS Teacher Resources webpage.

Alice Ferguson Foundation Bridging the Watershed Program (Grades

6-12): 3-5-hr field trips on various watershed topics listed below.

- Water Canaries: Assessing Benthic Macroinvertebrates
- Talkin Trash: Make a Litter Difference
- Exotic Invaders: Assessing Exotic invasive species
- Watershed Watchdogs: Assessing Water Quality
- Don't Get Sedimental: Runoff and Sediment in the River
- Sustainability Module

Cost: FREE to teachers who participate in a virtual or in-person training workshop. Contact education@fergusonfoundation.org.





"Nature is not a place you visit, it's home. If you release good energy, you can see that the whole world is a garden, and it takes nothing away from a human to be kind to an animal. There are so many amazing animals to see at this park."



OTHER USEFUL & RELATED RESOURCES

Anacostia Riverkeeper Publications on Anacostia River Health including study on microplastics in the River

Anacostia River Watershed Plant & Animal Downloadable Field Guide (English Version and Spanish Version) (Grades 4+): Simple field guide with photos of plant and animal species commonly found in the Anacostia River Watershed

DC Fish Field Guide

Kingman Island: Experience an Island Wetland

Location: Northeast DC

When to visit: Open year-round (Best seasons: spring and fall)

Visit options: Self-guided or

Naturalist-led trips

LEARNING OBJECTIVES

Explore a wetland habitat and **observe** the plants and animals it supports

Experience the Anacostia River on a boat

Learn how to kayak or fish

Participate in ecosystem monitoring and restoration projects

Understand how activities in the watershed affect plants, animals, and people

Appreciate the value of nature in the middle of a city and the role rangers play in protecting it

ACTIVITY OPTIONS:

SELF-GUIDED NATURE WALK using the resources in this guide

STAFF-LED FIELD TRIPS including nature walks, wildlife observation, trash cleanups, and restoration activities



AT KINGMAN ISLAND, students can discover how freshwater wetlands, vernal pools, wildflower meadows, and swamp forests can exist right in the middle of the city surrounded by big roads and a sports stadium! Students can observe frogs and other wildlife, monitor water quality, conduct trash cleanups from a kayak, build bird and bat houses, help restore a meadow, and learn to fish. They can also talk to the island rangers (many of whom grew up in the neighborhood) and learn how they work to protect this amazing island in the city.









Kingman Island is a man-made island built from the sand removed during a project to make the Anacostia River deeper!

Grade Levels: PreK-12

Activity Options:

• Self-guided visit using the materials in this guide (1-2 hrs)

• Staff-led tours include nature walks, restoration activities, and trash cleanups (2-3 hrs)

When to Visit: Year-round, open daily dawn to dusk

(Best season: spring or fall)

Cost: Varies by activity, FREE for self-guided visit in 2023 (teacher

arranges transport)

Location & Transport:

- Main entrance at RFK Stadium Lot 6, 575 Oklahoma Ave NE & Pedestrian entrance at 3101 Benning Rd NE
- School bus drop-off and parking at RFK parking lot
- Bike & pedestrian access from Anacostia Riverwalk Trail
- Closest Metro: RFK Armory (Orange/Blue Line), with 1-mile walk
- DC Streetcar to Benning Rd & Oklahoma Ave NE with 2-4 mile walk

Accessibility: Trails have a mix of gravel and unpaved surfaces, docks and bathrooms are wheelchair accessible

Max Capacity: Varies by activity and program

Restrooms: Available near the main entrance; composting toilet

available on the Anacostia River side of island

Lunch/Snack Options: Outdoor picnic tables on the Kingman Island

pier and adjacent meadow

Teacher Effort Required: LOW to book ahead & organize transport for naturalist-led field trips & MEDIUM to lead self-guided tour with the materials provided in this guide

Contact: kingmanisland@livingclassroomsdc.org

(202) 488-0627 x232

DETAILS & RESOURCE LINKS FOR 2023

General Information on visiting Kingman Island

Visitor Map

Summary of Visit Options

Self-Guided Tour of Kingman Island trails using Nature Detective scavenger hunts and Outdoor Activity Ideas included in this guide (Grades PreK-12)

Living Classrooms Environmental Education Programs Educator and ranger-led programs focus on watershed science, conservation and restoration (Grades K-12)

Anacostia Watershed Society Boat Tours & Outdoor Education Programs

Naturalist-led programs include SONG Meadow Restoration, Rice Rangers and Mussel Restoration programs introducing students to watershed restoration activities in the Anacostia River ecosystem. (Grades 2-12)

Information for Self-Guided Visits

Kingman Island offers many walking trails which are well-suited to nature walks, wildlife observation and nature learning activities. Plan 1-2 hrs for this nature experience. No reservations required to visit.

Materials for Kingman Island Nature Walks (All Ages):

- Outdoor Activity Ideas on p40 of this guide
- Nature Detective Scavenger Hunts on p47-50 of this guide
- Nature Resources and References p41 of this guide
- Anacostia River Watershed Plant & Animal Downloadable Field Guide (English Guide and Spanish Guide) (Grades 4+): Simple field guide with photos of plants and animals commonly found in the Anacostia River Watershed





DETAILS & RESOURCE LINKS FOR 2023

Information on Naturalist-Led Tours

Living Classroom Environmental Education Programs (All Ages)

Educator-led field trips including nature walks, wildlife and habitat observations, and restoration activities. Ranger-led field trips include nature walks, trash cleanups from a kayak, and restoration activities such as invasive species removal and building bird and bat boxes. Trip timings generally 10am-2pm, maximum capacity 50 students with adult chaperones. Cost varies depending on school & program choice. Contact: Living Classrooms, 202-488-0627 x232, kingmanisland@livingclassrooms.org

Anacostia Watershed Society Boat Tours & Restoration Programs AWS runs three school programs at Kingman Island:

- Mussel Power Program (Grades 2-8 for DCPS schools & Grades 9-12 for PGCPS schools, offered Jan-Jun) Students learn about the importance of freshwater mussels in the Anacostia River by raising mussels in the classroom and then releasing them into the river.
- <u>Rice Rangers Wetland Restoration Program</u> (Grades 4-8, offered Sep-Nov) Students learn about the importance of wetland plants by growing wild rice and planting it in the mudflats of the Anacostia River.
- SONG Meadow Restoration Program (Grades 1-3, offered Sep-Nov)
 Students learn about the importance of meadow habitat to wildlife by collecting and planting native wildflower seeds to restore meadows along the Anacostia River.

All AWS programs include a classroom visit, a field trip to release mussels or do plantings at Kingman Island and a boat tour on the Anacostia River. Maximum capacity 50-80 students with adult chaperones, divided into smaller groups. Cost: FREE including transport if needed. Contact Kendra Bierman at kbierman@anacostiaws.org or submit Teacher Signup form on the

AWS Teacher Resources webpage.

NATURE JOURNAL REFLECTION PAGES

P43 NATURE LOG
P46 FOREST OR RIVER EXPLORATION



WILLIAM DAVISRANGERS & FACILITIES MANAGER

"I love Kingman Island because I grew up playing on the island as a youth. My favorite place on the island is the vernal pool area."



OTHER USEFUL & RELATED RESOURCES

Other Useful & Related Resources

<u>Introduction to Anacostia River</u>: 2-minute introductory video to the river by Anacostia Riverkeeper (suitable for all ages)

Anacostia River Explorers Virtual Boat Tour: This video series by Anacostia Riverkeeper is a good way for teachers to familiarize themselves with the Anacostia River and the various topics students can learn about. View the full 50-minute video discussing the environmental and cultural history of the Anacostia River or learn about each segment of the river by clicking on the boat icons on the map under "Interactive boat tour" at the bottom of the webpage.

<u>Anacostia Riverkeeper Publications</u> on Anacostia River Health including study on microplastics in the River

Anacostia River Watershed Plant & Animal Downloadable Field Guide
(English Version) and Spanish Version) (Grades 4+): Simple field guide with photos of plant and animal species commonly found in the Anacostia River Watershed

DC Fish Field Guide

<u>Trace a Watershed Classroom Activity</u> (Grades 6+): Exercise by Anacostia River Watershed Society for students to trace Anacostia Watershed boundaries on a map.

Potomac River: Experience a River and its Watershed

Location: Southwest DC

When to visit: Spring (Mar-Jun) or

Fall (Sep-Dec)

Visit options: Naturalist-led Boat Tours

LEARNING OBJECTIVES

Explore the Potomac River on a research workboat

Observe aquatic life and trawl for fish Understand the concept of a watershed **Investigate** the health of the Potomac River and the Chesapeake Bay Watershed through water quality testing

Discover how human activities can help and harm plants and animals in the watershed

ACTIVITY OPTIONS

GUIDED EXPERIENTIAL BOAT PROGRAM on the Potomac River

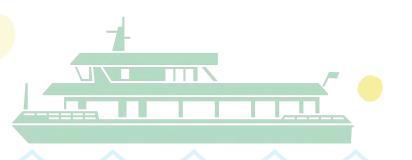
THE POTOMAC RIVER ENVIRONMENTAL EDUCATION PROGRAM

by the Chesapeake Bay Foundation helps students connect human culture with the natural environment and challenges them to brainstorm solutions to protect their local watershed. Students explore the Potomac River on a research workboat and evaluate first-hand the health of the local watershed. This is a full day, hands-on learning experience in which students can observe aquatic life in the river, trawl for fish, and monitor water quality by evaluating physical and chemical biological indicators. This 5-minute video captures one student group's experience on the river.











DAMIEN GIBBONS POTOMAC RIVER PROGRAM CAPTAIN

"I love the wide variety of students we can serve being in an urban setting but closely adjacent to several suburban neighborhoods. Their differences in age and backgrounds all seem to fade away when they're engaged with the outdoor environment they share."

Grade Levels: 4-12

Activity Options:

Staff-led experiential boat program

When to Visit: Spring (Mar-Jun) or Fall (Sep-Dec) 9am-3pm

Cost: \$400 per program in 2023 (teacher arranges transport; fee waivers available for Title 1 schools)

Location & Transport:

- Wharf Marina, 650 Wharf St SW 20024
- School bus drop-off at Wharf Marina
- Free parking at East Potomac Park, Hains Point
- Car parking at public garage: 1100 4th St SW (5-min walk to dock)
- Closest Metro: Waterfront Station (Green Line) + 2 block walk

Accessibility: Research boat is NOT wheelchair accessible

Max Capacity: 20-30 people (including adult chaperones)

Restrooms: Available on boat

Lunch/Snack Options: School-supplied packed lunch eaten on boat

Teacher Effort Required: LOW to book ahead and organize transport

Contact:

Chesapeake Bay Foundation 2800-445-5572 fieldtrips@cbf.org



NATURE JOURNAL

REFLECTION PAGES
P43 NATURE LOG P46 RIVER EXPLORATION

DETAILS & RESOURCE LINKS FOR 2023

Field Trip Description

Potomac River Environmental Education Program by the Chesapeake Bay Foundation

Information on Experiential Boat Program (Grades 4-12)

Full-day field trip includes excursion on a research boat to learn about the Potomac River and Chesapeake Bay Watershed. Students will evaluate watershed health by testing water quality, conducting plankton studies, trawling for fish and other activities. 20-30 people per boat including chaperones. Cost: \$400 (subsidies may be available upon request). Contact: 800-445-5572, fieldtrips@cbf.org or submit Program Application. Application window Oct-Dec for Spring programs (Mar-June) and mid-April to mid-May for Fall programs (Sep-Dec).

OTHER USEFUL & RELATED RESOURCES

- 1. Elementary School Materials: Pre-visit: Watershed Address & Post-visit What's in Your Lunch
- 2. Middle School Materials: Pre-visit: When Rain Hits the Land & Post Visit Think What's Under your Sink
- 3. High School Materials: Pre-visit Data in the Classroom & Post visit Student Wave Action Projects
- 4. Ideas for Student Actions & Projects for Watershed Health from Chesapeake Bay Foundation
- 5. Fishing for a Name (Grades 4+): online game by the Alice Ferguson Foundation for students to practice identifying different types of local fish in the field. Can use on phone or tablet.
- 6. Swim for Your Life (Grades 6+): online game by Alice Ferguson Foundation to help students learn about the journey and survival rates of migratory fish from birth to adulthood and spawning
- 7. Macroinvertebrate ID Activity (Grades 4+): online game by the Alice Ferguson Foundation for students to practice identifying Macroinvertebrates. This is a good activity for students to do BEFORE they go on a field trip investigating the stream and river health.

Rock Creek Park: Learn to Hike a Trail

Location: Northwest DC

When to visit: Year-round

Visit options: Self-guided

LEARNING OBJECTIVES

Learn how to hike a trail, follow a map, and explore nature on foot

Practice using online apps to identify plant and animal species

Appreciate the value of natural places especially in the middle of a big city

Discover how a forest changes through the seasons

Talk to a park ranger and understand the value of protecting national parks

ACTIVITY OPTIONS

SELF-GUIDED HIKES using the National Park App, resources in this guide and online apps to identify plants and animals

ROCK CREEK PARK is a fantastic place for students to start learning about national parks and how to explore them. This national park is a forested valley filled with native plants and animals with a stream flowing through it. It is the third oldest national park in the US and the first national park established in a city. But people have been visiting Rock Creek valley for more than 10,000 years! Until a few hundred years ago, the Algonkian people used the Rock Creek valley for hunting, fishing and winter shelter. Today, visitors can still see the annual spring herring run when the fish migrate back from the Atlantic Ocean to their spawning grounds in Rock Creek to lay eggs. In this nature experience, students can learn how to hike a trail and explore a forest and a creek. Rock Creek Park is also great place for students to learn about park rangers and the value of protecting national parks in conservation.



Every spring, Rock Creek's native herring fish return from the mid Atlantic Ocean to spawn in the creek of their birth. Visit Rock Creek in April to see them (if you are lucky!)







Grade Levels: PreK-12

Activity Options:

• Self-guided hike using the NPS App and resources in this guide

When to Visit: Year-round, open daily until sunset Cost: FREE in 2023 (teacher arranges transport)

Location & Transport:

- School bus drop off & ample parking at Nature Center at 5200 Glover Rd NW; dropoff & limited parking at Peirce Mill parking lots (GPS: Picnic Grove #1 and #2A North)
- Metro bus stop at McKinley and Beach Rd + 10-minute easy walk on paved trail to Nature Center
- Nearest Metro stop at Cleveland Park or Van Ness + 20-minute walk on forested trail or Tilden Road sidewalk (north side) to Peirce Mill

Accessibility: Nature Center and the adjacent paved 1/4 mile Edge of Woods Trail are wheelchair accessible. Beach Road access from Miller Cabin is also paved and suitable for wheelchairs. Service animals are allowed in the park.

Max Capacity: Any number of students you feel comfortable leading

Restrooms: Available at Nature Center and Peirce Mill

Lunch/Snack Options: Outdoor picnic tables at Nature Center and

Peirce Mill

Teacher Effort Required: HIGH to lead self-guided hike using National Park Service app, other apps, and materials provided in this guide

Contact: NPS Visitors Center, Wed-Sun 9am – 5pm, 202-895-6070





DETAILS & RESOURCE LINKS FOR 2023

General Rock Creek Park Visit Information **Visitor Map**

Recommended Hiking Trails

- Self-Guided Hike: Edge of Woods Trail highlights common trees of Rock Creek Park. The trailhead is at the main entrance of the Nature Center. This 1/4 mile paved flat loop trail is suitable for Grades PK+ and wheelchair accessible (20-30 mins with stops). Afterwards students can enjoy lunch and nature games outside the Nature Center.
- Self-Guided Hike: Milkhouse Ford Trail is a 1.75 mile loop trail through a forested valley to Rock Creek. Start at the Western Ridge Trailhead sign outside of the Nature Center, just past the Edge of Woods sign, and head NORTH to Western Avenue. Cross the busy road and follow the signs for Fort DeRussy to the footpath with YELLOW trail markers (Note: Milkhouse Ford is NOT signed at this location). Students will walk downhill to the creek and then back up the historic Milkhouse Ford trail, once a major route for wagons and horses to cross Rock Creek. The meadow next to the creek is a good spot for nature activities and snack/lunch before returning to the Nature Center. This trail is suitable for Grades 2+ (60 min without stops).
- Self-Guided Hike: Reservation 630 Trail (formerly the Melvin Hazen trail) This 1 mile out-and-back trail descends down a forested valley to Rock Creek. From Cleveland Park Metro Station, head north on Connecticut Avenue 2 blocks, and find the trail sign just past Rodman Street and Wilshire Park Condominium. Follow the footpath with YELLOW trail markers to Rock Creek and Peirce Mill.. The bridge crossing is a good place to look for fish and see the fish ladder which helps fish reach their spawning grounds. The meadow area is a good spot for nature activities and snack/lunch before returning via the same trail. The trail has a medium descent, 3 creek crossings and an uphill climb on the return. Suitable for Grades 3+ (60 mins without stops).
- Self-Guided Hike: Boulder Bridge Trail is a longer more strenuous trail through the forest and along Rock Creek with downhill and uphill sections. The trail starts at the Horse Center a short walk from the Nature Center. From the trailhead, follow the PINK trail markers down through the forest and along Rock Creek to the bridge crossing to Beach Road (now closed to cars). The return route will also be marked with GREEN markers when it joins the Western Ridge Trail. There are many different spots for nature observation, activities and breaks along the way, both in the forest and along the creek. This 3.75 mile Loop trail is suitable for Grades 6+ (allow 3-4 hrs with stops at the creek and other locations for rest and activities). Hiking the trail before guiding students is highly recommended for this trail, as the route is not always well-marked.

DETAILS & RESOURCE LINKS FOR 2023

Information for Self-Guided Hikes

If possible, check in at Nature Center to get trail maps, meet the Park Rangers, and see the flora and fauna displays. The Ranger can introduce the park to students, discuss trail hiking tips, and help teachers mark out their trail on the map. During the hike or at a rest stop, students can do one of the Nature Detective Scavenger Hunts from this guide, and after the hike, they can complete the Journal Reflection Pages.

IMPORTANT NOTE: It is best to hike the trail BEFORE taking your students on it. Mark out the trail route on a map and/or download the National Parks App and load the trail map before starting the hike. (Remember to turn on your phone location settings.).

Tips for Hiking a Nature Trail

What to Bring

- 1. Wear sturdy shoes, dress in layers, and anticipate changes in weather.
- 2. Bring a map or guide, first aid kid, bug spray & sunscreen.
- 3. Bring snacks and water for longer hikes. Stay hydrated.

How to Find and Hike the Trail

Step #1: To start your hike, look for a sign similar to the one on this page with the name of your trail. Show students how to read the sign for destinations, distances, and which color trail markers to follow as they hike. (For example, the sign in the photo indicates that hikers should follow the YELLOW markers for this trail.)

Step #2: Follow the colored trail markers painted on trees or marked on wooden posts throughout the hike. It's fun for students to count the number of trail markers they spot enroute, and this activity helps students learn to navigate with and without GPS. Sometimes two trails merge on one route, so students will see two different color trail markers on trees & posts.

Step #3: Be sure to take breaks to rest and hydrate, and plan stops for nature observation & activities. Most importantly, enjoy the natural surroundings!

Tips while ON the Trail

- 1. Stay on the trail to avoid poison ivy, snakes, and ticks.
- 2. Walk & talk quietly so you see more animals. But don't pet or feed them.
- 3. Take your time so you don't miss anything.
- 4. Use your senses to see, hear, smell, and touch.
- 5. Take only pictures and leave only footprints!



Materials and Resources

- Nature Detectives Scavenger Hunt pages included on p47-50 & Outdoor Activity Ideas on p40 of this guide.
- National Park Service App: Interactive park maps and basic information
- Rock Creek Park Trails & Map
- Species Identification Apps: SEEK for animals & plants,, Merlin for Bird ID, Creek Critters for stream organisms and Picture This for plants & trees.
- (Optional) Junior Ranger books for ages 6-8 and 8+ are available at the Nature Center. Students can get National Parks Badges from Park Rangers after completing a few activities

OTHER USEFUL & RELATED RESOURCES

Plant ID Games (Grades 4+): online game by the Alice Ferguson Foundation for students to practice identifying local trees, vines, shrubs and herbaceous plants in the field. Can use on phone or tablet.

Smithsonian's National Zoo: Experience the Animal Kingdom

Location: Northwest DC

When to visit: Year-round (Jan-March

have fewer crowds)

Visit options: Self-guided tour or

Staff-led animal programs

LEARNING OBJECTIVES

Observe different animals from around the world and see how animal keepers take care of them

Practice animal observation skills

Discover & Appreciate the diversity of animals on our planet and their many amazing features

Understand the threats to different animal species

Learn how conservation scientists are working to protect animals

ACTIVITY OPTIONS

SELF-GUIDED TOUR using the National Zoo Animal Adventure Online App

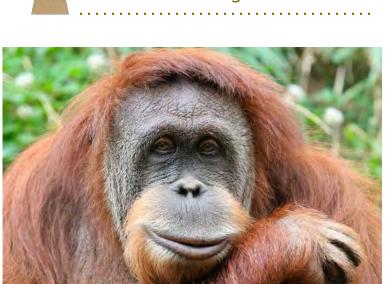
DAILY ANIMAL PROGRAMS:

various 15 to 20-minute feedings or animal encounters

THE NATIONAL ZOO is a fantastic place to see animals from around the world without having to travel far. The Zoo is well-organized and easy to navigate with paved walkways. Students can see lions, pandas, primates, reptiles, and much more! They can meet elephants, watch sea lions catch fish, see sloth bears slurp ants, and watch the zookeepers care for the animals in the daily programs. The Zoo is also a great place to introduce students to the work of conservation scientists to understand and protect animal species around the world.



The Smithsonian's National 700 has a variety of animal webcams that are streaming live 24/7!



NATURE JOURNAL REFLECTION PAGES

P43 NATURE LOG P45 ANIMAL EXPLORATION



Grade Levels: PreK-12

Activity Options:

- Self-guided tour with Animal Adventure Online App
- Staff-led Animal Encounter
- Live virtual field trip

When to Visit: Year-round, every day 8am-6pm (summer) & 8am-4pm (winter)

Cost: FREE but entry passes required in 2023 (teacher arranges transport)

Location & Transport:

- Main entrance at 3001 Connecticut Ave NW
- Metro bus & school bus drop-off at main entrance with limited bus parking available M, T, W at Parking Lot E in the lower zoo (Reservations required)
- Closest Metro: Woodley Park (Red Line), 10 min walk to zoo

Accessibility: All exhibits are wheelchair accessible, wheelchair & stroller rentals available, service animals welcome. Social Narratives to support cognitive needs also available.

Max Capacity: 385 max per group, tickets can be reserved in groups of 55 students with accompanying adult chaperones (1 adult for every 10 students)

Restrooms: Available at Visitor Center, Panda Plaza & Elephant Outpost, Bird House & Conservation Pavillion

Lunch/Snack Options: Picnic tables at above locations with concession stands nearby

Teacher Effort Required: MEDIUM to book ahead, organize transport & lead self-guided tour with Animal Adventure online app

Contact:

zootickets@si.edu



DETAILS & RESOURCE LINKS FOR 2023

General Field Trip Information

Visitor Map

<u>Daily Animal Encounter</u> Event Schedule (feedings & meet the animals)

Information for Self-Guided Visit

Lead students through the zoo using the online Smithsonian guides listed below. The interactive Animal Adventure Guide leads visitors through key animal exhibits providing information and interactive questions about various animals enroute. Additional activities include 15-20 minute Daily Animal Encounter programs run by zoo staff (check schedule for animal encounter options). Cost: FREE (~2-3 hrs). Reserve passes (required) and bus parking (if needed) at least 72 hrs in advance by submitting a Group Reservation Request and Bus Parking Reservation Request.

Materials & Resources

- Online App <u>Animal Adventure Guide</u> All Ages (download beforehand on phone or ideally iPad so students can see pictures and do quizzes while on the tour)
- Zoo Crew Family Guide: English Version & Spanish Version (Prek-Grade 6) (print beforehand)

OTHER USEFUL & RELATED RESOURCES

<u>Social Narratives</u>: Pre-visit Resources for students with cognitive needs

Elementary School (Grades K-5)

- Learning Lab Lessons
- <u>Conservation Classroom:</u> Live Virtual Monthly Programs run 1x per month (30-45 minutes)

Middle School: Follow that Bird Curriculum & Resources High School:

- <u>Conservation Success Stories:</u> Self-Paced E-learning unit with Knowledge Checks (2 hr lesson)
- Secret World of Zoo Jobs: <u>Zoo Curator Video</u> interviews (full zoo careers list)

The Well at Oxon Run: Experience an Urban Farm and Stream

Location: Southeast DC

When to visit: Spring, Summer, or Fall

Visit options: Self-guided or

Educator-led field trips

LEARNING OBJECTIVES

Learn about urban farms, healthy ecosystems, and the benefits of growing your own food

Discover an urban stream that flows in the middle of the city

Investigate stream health through scientific testing

Participate in restoration activities like trash cleanups to improve the health of the stream and farm

ACTIVITY OPTIONS

SELF-GUIDED NATURE WALK at the Well and along Oxon Run Stream

EDUCATOR-LED FIELD TRIPS including tour of the farm and activities at adjacent stream

HAVE YOU EVER walked through an urban fruit tree orchard where the fig trees are named after singers from the Temptations and Destiny's Child, and the persimmon trees are named Marvin G and Duke E? That's just one of the fun learning features at the Well at Oxon Run! This urban farm was built in 2020 by DC Greens and community members as a gathering and wellness space for the local Congress Heights neighborhood. In addition to its harvest of fresh fruits and vegetables, the Well also has an outdoor classroom to teach students about urban farming and the connection between food, health, and the surrounding ecosystem, including Oxon Run stream which flows through this urban neighborhood.











Grade Levels: PreK-12

Activity Options:

- Self-guided nature walk at the Well and along Oxon Run stream
- Educator-led field trips with Green Scheme and Ward 8 Water Watchers

When to Visit: Open spring, summer and fall 11am-5pm

Cost: Varies with activity: FREE to \$10 per student (teacher arranges transport)

Location & Transport:

- 300 Valley Ave SE, 20020
- School bus drop-off at The Well at Oxon Run entry gate
- Closest bus stop is Atlantic Ave SE & Valley Ave SE, 5 minute walk from the Well. Closest metro stop is Southern Avenue Station on Green Line + 35 minute walk.

Accessibility: Paved trails at the farm and along Oxon Run stream.

Maximum Capacity: 20 students per program, 2 programs can run at

one time

Restrooms: Two on-site Port-a-Potties INSIDE the Well

Lunch/Snack Options: Outdoor picnic tables

Teacher Effort Required: LOW to book ahead & organize transport for educator-led field trip and **MEDIUM** to lead self-guided nature walk using the resources provided in this guide

Contact:

Lauren Parker, <u>lparker@greenscheme.org</u> OR Jerome Nesbitt, Jnesbitt@greenscheme.org

DETAILS & RESOURCE LINKS FOR 2023

Well at Oxon Run General Information

Summary of Visit Options

Ward 8 Water Watchers Program explores Oxon Run stream and healthy ecosystems (Grades PreK-12)

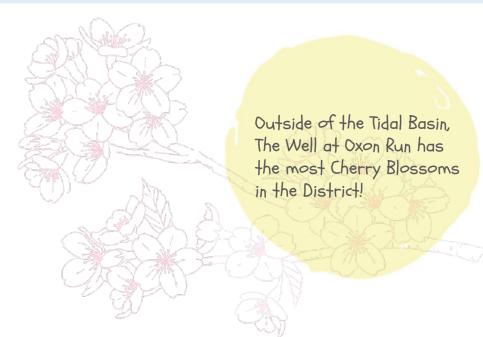
Self-guided nature walks through the farm and along Oxon Run stream (All Ages)

Information for Self-Guided Visit

Lead students on a Nature Discovery walk through the Well's garden space and on the trail next to Oxon Run stream. Students can explore using the resources listed below. Picnic tables and play areas are available onsite for snacks/lunch and outdoor play. Recommended to bring balls & jump ropes. Cost: FREE. (~1-2 hrs)

Materials & Resources

- 1. Nature Detectives Scavenger Hunt activity pages on p47-50 & Outdoor Activity Ideas on p40 of this guide (Grades preK-12)
- 2. Online Apps for plant and animal identification listed on p41 (recommended for ages 8+)



DETAILS & RESOURCE LINKS FOR 2023 (continued)

Information for Educator-led Field Trips:

Ward 8 Water Watchers Program led by the Green Scheme & Nature Forward educators (Grades PreK-12): Field experiences for students to learn about stream and ecosystem health through lessons at Oxon Run stream. This program includes 6 lessons (~60-90 mins each):

- What's Up with Oxon Run? explores current conditions in the park including pollution issues
- What Grows in Oxon Run? explores plants in the ecosystem
- What Lives in Oxon Run? explores the health of the creek
- From Stream to River explores the larger Anacostia Watershed, including a boat tour
- Let's Clean up Oxon Run includes trash cleanup activities
- Let's Show Oxon Run Some Love

Offered from April-Dec, Tues & Thurs, between 11am-5pm, Maximum Capacity is 40 students divided into 2 groups. Cost: \$10 per student with free admission for each adult chaperone per 5 students (\$100 minimum program fee). Contact Lauren Parker, Iparker@greenscheme.org OR Jerome Nesbitt, Jnesbitt@greenscheme.org

OTHER USEFUL & RELATED RESOURCES

What's up with Oxon Run? 8-minute video introducing Oxon Run stream and tracing its flow from headwaters to mouth. Good intro for teachers and students to learn about the Oxon Run stream system and its watersheds. (suitable for All Ages)

Macroinvertebrate ID Activity (Grades 4+) online game by the Alice Ferguson Foundation for students to practice identifying Macroinvertebrates. This is a good activity for students to do BEFORE they go on a field trip investigating the stream and river health.





NATURE JOURNAL REFLECTION PAGES

P43 NATURE LOG P44 PLANT EXPLORATION P46 RIVER EXPLORATION



DIRECTOR OF THE WELL AT OXON RUN & RONNIE WEBB COFOUNDER OF GREEN SCHEME

"Many schools have gardens, but our garden has a school!!"

US Botanic Garden: Experience the Plant Kingdom

Location: National Mall near Capitol Hill, Southwest DC

When to visit: Year-round

Visit options: Self-guided or Educator-led (on-site & virtual)

LEARNING OBJECTIVES

Appreciate the diversity of plants from around the world and their many fascinating features

Practice plant observation skills

Discover the connection between plants, food, air and climate change

Understand the often irreplaceable value of plants and the threats to some species

Learn about explorers and expeditions, botanists, and horticulturists

ACTIVITY OPTIONS

SELF-GUIDED TOUR using USBGprovided materials to explore & learn through a scavenger hunt

USBG STAFF-LED TOUR includes an on-site 45-minute activity-based lesson and 45-minute self-guided tour. Live virtual field trips also available.

This experience can be entirely indoors or combined with the outdoor gardens.

THE US BOTANIC GARDEN is a living plant museum and a wonderful destination for students to explore the world of plants and understand their importance and often irreplaceable value to people and our planet's ecosystems. Students will have a chance to walk through a warm and lush tropical plant environment, move through a dry and sparse desert system, and experience many other plant ecosystems including a children's garden, orchid garden, medicinal plants garden, and primeval garden. In the outdoor gardens, students can observe native plants and features of sustainable gardens.







Some of the plants at the US
Botanic Garden are descended
from seeds collected in the 1830s
when the six ships of the US
Exploring Expedition set sail to
explore the world's oceans,
continents and islands. The plants
brought back were the ones that
started the USBG plant collection!



Grade Levels: PreK-12

Activity Options:

• Self-guided tour with USBG materials (1-2 hrs)

• Staff-led onsite lesson (1.5 hrs) or live virtual field trip (45 mins)

When to Visit: Year-round, open daily 10am-4pm Cost: FREE in 2023 (teacher arranges transport)

Location & Transport:

• 100 Maryland Ave SW, DC on the National Mall near Capitol Hill

• School bus drop-off at Garfield Circle 1 block away

• Closest Metro: Federal Triangle + 3-4 blk walk (Orange/Blue/Silver Lines) OR Judiciary Square (Red Line) + 15 min walk

Accessibility: Wheelchair accessible, service dogs allowed. **Detailed accessibility information**.

Max Capacity: 40-50 students (divided in 2 groups) with 1 accompanying adult chaperone for every 6-8 students

Restrooms: Available indoors

Lunch/Snack Options: Picnic at outdoor garden tables

Teacher Effort Required: LOW to book ahead & organize transport for staff-led visit and MEDIUM to lead self-guided tour using USBG-provided resources.

Contact: <u>USBGfieldtrips@aoc.gov</u>

Website: usbq.qov/schools-families/fieldtripresources

es/inelatinglesources

DETAILS & RESOURCE LINKS FOR 2023

Basic Field Trip Information

- Field Trip Overview
- Visitors Map
- Field Trip Logistics

NATURE JOURNAL REFLECTION PAGES

P43 NATURE LOG

Information For Self-Guided Visit

Lead students through the indoor plant conservatory which hosts plants from all over the world. Weather-permitting, guide students through either the outdoor Regional Garden or Bartholdi Park. Students can explore using the resources listed below. Cost: FREE (~1-2 hrs). Recommended to contact <u>USBGfieldtrips@aoc.gov</u> in advance of trip.

Materials & Resources

Plant Passports & Field Journals. Available onsite OR print from **USBG webpage**.

GRADES PREK-2: <u>Plant Passport: Parts of a Plant</u> (*Tip! Plot route on passport map BEFORE your visit*)

GRADES 3-12: Field Journals

- <u>Plant Explorer's Field Journal</u>: Students look for Explorer Plants from a real expedition in this fun indoor plant scavenger hunt.
- <u>Field Journal: Observations in The Regional Garden</u>: Outdoor scavenger hunt highlights native plants (Best done in spring or fall)
- <u>Field Journal: Sustainability in Bartholdi Park</u>: Outdoor scavenger hunt highlights sustainable landscapes (Best done in spring or fall)

Information on Staff-led trips

<u>USBG Educator-led field trips</u> (Grades PreK-12) include a 45-minute lesson + 45 minute self-guided tour of the Conservatory. USBG lessons are activity-based and NGSS standards-aligned. See USBG <u>website</u> for current offerings on a variety of plant topics including Seeds, Plants & Pollinators, Plant Adaptations, Photosynthesis and Conservation Investigation. Live virtual field trips are also available for Grades 3-5 only. Cost: FREE.. Contact <u>USBGfieldtrips@aoc.gov</u> to schedule visit.

OTHER USEFUL & RELATED RESOURCES

Video Plant Conversations on topics like <u>Plant Stress & Resilience</u> or <u>Growing</u> <u>Carnivorous Plants at Home</u> (suitable for Gr 9-12)

US National Arboretum: Experience the Plant Kingdom

Location: Northeast DC

When to visit: Open year-round; Best months are spring (mid-Apr to June) or

fall (until early Nov)

Visit options: Self-guided or

staff-supported tours

LEARNING OBJECTIVES

Appreciate the diversity of plants and their natural beauty

Practice plant observation skills through an augmented reality game

Discover interesting plant features

Learn about horticulturists, plant research, and how people rely on plants and pollinators for food

Experience a community garden

ACTIVITY OPTIONS

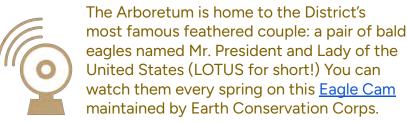
SELF-GUIDED TOUR using Friends of the National Arboretum Scavenger Hunts (for younger students) or the Agents of Discovery Mission App (for older students)

STAFF-SUPPORTED FIELD TRIP to the Washington Youth Garden includes an orientation and setup of garden-based activity station



THE US NATIONAL ARBORETUM is a beautiful outdoor space that looks like a park but is actually a science center dedicated to growing and researching plants. The Arboretum grounds are large and showcase many different plant collections, but it's hard to see them all in one visit. This guide details a few field trip options for students to experience selected Arboretum highlights including a scavenger hunt in the Fern Valley Native plant collection followed by a visit to the Washington Youth Garden to learn about garden basics, pollination, and nutrition. Older students can enjoy the Agents of Discovery augmented reality game set around the Youth Garden and learn some basics of tree botany. Students can also walk through the Azalea Garden well-known for its spring colors and see the famous Capitol Columns which used to be part of the Capitol building!









PROGRAM MANAGER, FRIENDS OF THE NATIONAL ARBORETUM

I started my career as a teacher, but I always had a passion for growing food and become a Master Gardener. Going to a teacher training at the Washington Youth Garden inspired me to do more of this work.



QUICK FACTS

Grade Levels: PK-12 (Washington Youth Garden trips are geared toward PK-5)

Activity Options:

- Self-guided half-day tour using Friends of the National Arboretum Scavenger Hunts, Agents of Discovery Mission App, or the resources provided in this guide (1-2 hrs)
- Staff-supported trips to the Washington Youth Garden (1+ hrs)

When to Visit: Open year-round, 10am–5pm daily. Best in spring (mid-Apr to Jun) or fall (Sep to early Nov)

Cost: FREE in 2023 (teacher arranges transport)

Location & Transport:

- Entrance at 2400 R St NE off Bladensburg (before 2pm) OR 3501 New York Ave NE
- School bus drop-off at Main Visitor Services Building with parking At Grove of Trees parking lot
- For Washington Youth Garden, drop off at the Washington Youth Garden, NOT the Visitor Services Building

Accessibility: The main corridors around the Capitol Columns, Herb Garden, and Bonsai Museum are paved, and the Visitor Services Building has ADA accessible bathrooms. Outlying areas include unpaved trails. The Washington Youth Garden is flat but the surface is grass and mulch.

Max Capacity: Varies by activity (see Details & Resources section)

Restrooms: Available indoors at Visitor Services Building and Grove of State Trees Parking Lot. A seasonal portable restroom is located at the Washington Youth Garden.

Lunch/Snack Options: Picnic tables at Grove of State Trees & Washington Youth

Garden

Teacher Effort Required: MEDIUM to reserve & organize staff-supported Washington Youth Garden trips and HIGH to lead self-guided tour with Friends of National Arboretum Scavenger Hunts and Agents of Discovery Arboretum Mission online App

Contact:

education@fona.orgBrianne Studer, FONA Director of Programsbstuder@fona.org202-544-8733









GARDEN MANAGER, FRIENDS OF THE NATIONAL ARBORETUM

"My very favorite trees in the US National Arboretum are the weeping cherry trees near the National Herb Garden. They bloom each March, and it is magical! It reminds me of my family and heritage. The flowers are beautiful, and it is soothing for me to look at and hang out underneath the low-hanging branches."

DETAILS & RESOURCE LINKS FOR 2023

General National Arboretum Visit Information

Visitor Map

National Arboretum Recommended Educator Resources

Summary of Visit Options

- **Staff-supported** SPROUT field trip to Washington Youth Garden (60+ minutes, preK-5)
- Self-guided visit for younger students includes plant scavenger hunts in Fern Valley (30 mins) & visit to the Washington Youth Garden (30 mins, preK-12)
- Self-guided visit for older students includes nature walk & scavenger hunt at the Washington Youth Garden and adjacent meadow using the Online Agents of Discovery: National Arboretum Mission App (Grades 5+)

DETAILS & RESOURCE LINKS FOR 2023

Information for Self-Guided Visit

Recommended Walking Route:

- Park at Visitors Center and pick up Arboretum Map.
- Walk 10 mins through Herb Garden, past the National Capitol Columns to Fern Valley for Scavenger Hunt Activities.
- Walk 5 mins from Fern Valley to Washington Youth Garden. If you did not register for a field trip with Washington Youth Garden, please be respectful of FONA staff who may be harvesting vegetables or doing garden work. They are happy to answer questions. (NOTE: Class can divide into groups of 10-15 students with one group in Fern Valley & second group in Youth Garden and then switch locations.)
- Have snack/lunch at Washington Youth Garden picnic tables.
- Return to Visitors Center directly or via Azalea Garden trails.

Materials For Self-Guided Visit:

• Fern Valley Resources

Contact education@fona.org to receive and print the materials listed below before your visit.

- Grades PreK-1: Fern Valley Scavenger Hunt
- Grades K-2: Fern Valley Bingo
- Grades K-2: Washington Youth Garden Rainbow Scavenger Hunt
- Grades 3-5: Fern Valley Spring & Summer Scavenger Hunts (Note: teachers should look through plant list beforehand to know what to look out for. Many plants are signed on the trail.)
- Agents of Discovery Mission App:

National Arboretum Augmented Reality Game – starts at Washington Youth Garden and surrounding areas (download beforehand on smartphone or tablet). Suitable for Grades 5+.

NATURE JOURNAL REFLECTION PAGES

P43 NATURE LOG
P44 PLANT EXPLORATION

Information on Staff-Supported field trips

SPROUT Field Trip (Grades PreK-5): Teachers can register for this staff-supported field trip to the Washington Youth Garden which includes a 15-minute staff-led orientation and a staff-supported garden-based activity station. In addition, teachers and chaperones will lead students independently through the garden to explore the pollinator garden and the Nature Explore classroom. Other self-guided activity options include a walk through Fern Valley directly across from the Washington Youth Garden or the Capitol Columns nearby.

SPROUT field trips are offered on Wednesdays and Fridays in the spring and fall. Maximum capacity: 45 students divided into groups of 5-10 students with accompanying chaperones. Picnic table are available at the Washington Youth Garden for snacks or lunch before or after the visit. More information and registration details can be found on the <u>Friends Of The National Arboretum School Garden Program</u> webpage. Upon registration, staff will coordinate and help you plan your visit in advance and discuss activity-station options which will be ready upon arrival.

OTHER USEFUL & RELATED RESOURCES

National Arboretum Recommended Educator Resources



Section 2: Nature Learning Ideas & Resources

These pages include ideas for outdoor activities, recommendations for classroom learning resources and online Nature Apps, and additional organized nature experiences in the DC Metro area.

Nature-Based Outdoor Activity Ideas for All Seasons and All Locations



Nature Discovery Activities

- **1. Explore** with a Nature Detective scavenger hunt. See p47-50 to choose and print age-appropriate activity pages.
- 2. Collect different leaf shapes & sort them into piles.
- 3. Count how many different types of trees you can find.
- 4. Look for animal clues (homes, tracks & scat.)
- 5. Look for different colors in nature. List them.
- 6. Look for different textures in nature: rough, smooth, wet, dry, cool, warm, sticky, soft, prickly.
- 7. Look for signs of humans. How many different clues of humans in the landscape can you find?
- 8. Find something in nature you can make something useful with: Describe it! Draw it! Make it!



Nature Observation Activities

- Feel the Earth! Breathe the air! Run in a field. Climb trees. Dig in the soil. Feel the wind. Smell the flowers. Dip your feet in the river. Splash in the rain or a puddle.
- 2. Experience the seasons:
 - -Fall Experience: jump in the leaves
 - -Winter Experience: feel the cold, play in the snow
 - -Spring Experience: feel the rain, smell the flowers
 - -Summer Experience: feel the sun and the heat
- 3. **Listen for nature sounds:** birds, woodpeckers, crickets, grasshoppers, frogs, animals foraging, flowing water, or raindrops. How many different sounds can you hear?
- **4. Sniff it!** A flower, green grass, a clump of soil, pine needles, tree sap, wet leaves, fungus or moss. How many different smells can you find?
- 5. Look Up! What color is the sky? Is the sun shining? (But don't look directly at it.) Are there clouds in the sky? Are they white or grey? Can you see the moon, even in the day?
- **6. Watch an animal closely:** how do they eat, drink, move, sleep, play, communicate?



Nature Art Ideas

- 1. Leaf rubbings: place a sheet of paper on top of a leaf and use the side of a crayon to rub all over the paper
- 2. Draw different tree shapes (especially good to do in winter when the leaves have fallen)
- 3. Draw the same tree in each of the four seasons.
- 4. Pick up & make a collage of different nature objects like leaves, pinecones, stones, or rocks. Arrange them into an animal shape with a head, body and legs (or another pattern) on the ground.
- 5. Make your own paintbrush! Use twigs, evergreen leaves, or flowers and some string to tie them together.



Nature Games

- 1. Move! Jump like a frog. Dig like a mole. Flutter like a butterfly. Flap like a bird. Slither like a snake. Swim like a fish.
- 2. Animal Hide & Seek: Select one person to be the predator and choose which animal they are (owl, fox, spider, toad, snake, bear, robin, hawk). The rest of the group chooses which prey they want to be (mosquito, mice, rabbit, moth, worm, fish, fly, squirrel). The predator counts to 10 while the prey find hiding spots. When the predator starts its hunt, the prey can run away. First prey caught becomes the next predator!

Adapted from **Backyard Explorer: On The Nature Trail.** 2018. Storey Publishing.

Nature Learning Resources & References

HOW TO PREPARE FOR OUTDOOR LESSONS

(adapted from Outdoor Learning Training Manual by Urban Adventure Squad)

WHAT TO BRING

- 1. Wear sturdy shoes, dress in layers, and anticipate cold, wet, and hot weather.
- 2. Bring a map or guide, first aid kit, bug spray, and sunscreen.
- 3. Bring snacks and water for longer hikes. Stay hydrated.

TIPS ON THE NATURE TRAIL

- 1. Stay on the trail to avoid poison ivy, snakes, and ticks.
- 2. Walk & talk quietly so you see more animals. But don't try to pet or feed them.
- **3.** Take your time so you don't miss anything.
- **\cdot**. Use your senses to see, hear, smell, and touch.
- 5. Take only pictures and leave only footprints!

Classroom Resources

<u>Project Wild Professional Development Training Program</u>: Teacher training workshops by DOEE on how to organize and lead outdoor nature experiences.

NGSS-Aligned PreK-5 Environmental Literacy Guide: Outdoor activity ideas at school, in the neighborhood, or on off-site field trips by OSSE (Office of State Superintendent of Education). Suitable for PreK-Grade 5.

<u>Find Your Park</u>: National Park Service website finds your closest national park based on your location and preferred activity type.

National Junior Ranger Booklets: Downloadable National Park Service booklets on various topics including park exploration, stargazing, caving, fishing, archaeology, and paleontology. Students can earn Junior Park Ranger badges by completing and mailing booklet to NPS or showing them to a park ranger.

<u>City Nature Challenge</u>: Annual 4-day challenge in April inspires people around the world to find and document wildlife in their cities using the iNaturalist App. This is a wonderful opportunity to engage students in a global nature event! Organized by the California Academy of Sciences.

Check link to Washington DC Metro Area City Nature Challenge event.

Useful Nature Apps



<u>Seek</u> by iNaturalist: Easy to use phone app which identifies animals, plants, and fungi based on photo uploads. Provides information on each species and how many other observations of that species have been made nearby. Users can earn virtual badges for observations. Cost: FREE. Suitable for ages 8+.



<u>iNaturalist</u>: Widely used community-based app helps identify plant, animal, bird, and insect species through photo uploads. Project initiated by California Academy of Sciences & National Geographic Society. Cost: FREE. Recommended for age 13+.



Merlin Bird ID by Cornell Lab of Ornithology: This user-friendly phone app identifies birds around the world by answering simple questions or through photo uploads. Cost: FREE with email signup. Suitable for ages 8+.



<u>Creek Critters</u> by Nature Forward and the Izaak Walton League of America: This user-friendly phone app guides users on how to find and identify small organisms in freshwater streams through simple instructions and questions. Cost: FREE. Suitable for ages 4+.



<u>Picture This</u>: User-friendly phone app identifies plants, trees & flowers based on photo uploads. Provides detailed descriptions, facts and related-stories. Related apps (Picture Birds, Insects & Fish) offer similar features. Cost: FREE one week trial, then \$29.99 annual. Suitable for ages 13+.

More Organized Nature Experiences

Camp Fraser Great Falls, VA

3-day, 2-night overnight MWEE Experience by Living Classrooms

Hard Bargain Farm, MD

3-day, 2-night overnight MWEE Experience by Alice Ferguson Foundation

Prince Williams Forest, VA

3-day, 2-night overnight MWEE Experience by Nature Bridge



Section 3: Nature Journal & Activity Pages

Teachers can use these printable activity pages to lead field trips at ANY nature destination.

Nature Journal Pages include a Nature Log for students to record general observations and Plant Exploration, Animal Exploration, and Forest & River Exploration pages to help students make detailed observations of specific plants, animals, forests, and water bodies.

Nature Detective Activity Pages include four scavenger hunts designed for different age groups.

Nature Log

DATE	LOCATION	WEATHER
What activities did you	do?	
Describe the plants you	saw.	
Describe the animals or signs of animals (like tracks, scat) you saw.		
If you've been here befo	ore, is anything different t	han last time?
How did you feel at this	nature place?	
What words would you	use to describe this place	e to others?
Name one thing you car	n do to keep this place he	althy and beautiful.

NOTES + DOODLES

Share something in nature that you wondered about today: write a poem, draw a picture, tell a story!







See, Think, Wonder: Plant Explora	tion
--	------

Draw and label one plant you saw today. Be sure to show the plant's best feature!

I SEE (What do you see?)	I THINK (What important job does this plant do in nature?)	I WONDER (What questions do you have about this plant?)
		Add 1 days
		对在的 走

Why did you pick this plant to draw? _____ Name one feature about this plant you think is interesting. _ Does this plant look happy/sad, healthy/unhealthy? _____ Are any animals using this plant? What are they using it for? ______ If you can't see any animals using the plant, do you see any clues animals were there?

See, Think, Wonder: Animal Exploration

Watch an animal closely for 5-10 minutes. It can be any animal, from a tiny insect to an elephant!

Write your observations in the table below. These question will help get you thinking:

- 1. What is this animal doing?
- 2. Is this animal alone or in a group?
- 3. How does this animal eat and drink?
- 4. How does this animal move?
- 5. How and where does this animal sleep? What position does it sleep in?
- 6. How does this animal play?
- 7. How does this animal communicate?

	ISEE	ITHINK	I WONDER
1			
2			
3			
4			
5			
6			
7			

Include all its main parts and be sure to show its best feature!

Forest or River Exploration

NATURE NOTES:		
What did you EXPECT to see in this nature experience?		
What did you ACTUALLY see in this nature experience?		
What sounds did you hear?		
What smells did you smell?		
What colors did you observe?		
What special things you did you see? (plants, animals, something else?)		
If you explored a river or creek, what did the water look like?		
Did you see any fish in the water (Y/N)? Would you like to swim in this water?	Bathe in this water? Drink this water?	Why or why not?
Did you see signs of humans in this landscape?		
Did you see any litter (Y/N)? If yes, how do you think it got there?		
What was your favorite part of this nature experience?		X
	NATURE MAP	

Draw a word or picture map of your forest walk or river experience. Show the important features you saw on the way: At the beginning? At the end? What you saw in between?



Use your senses do discover nature outdoors. Draw or write what you find in each box.

something round	something smooth
something that flies	something prickly
something red	that makes noise
something cold	something slimy
something Warm	something that crawls

^{*}Adapted from <u>Hike It Baby.</u> 2023.



Rainbow Scavenger Hunt (PreK-Grade 1)

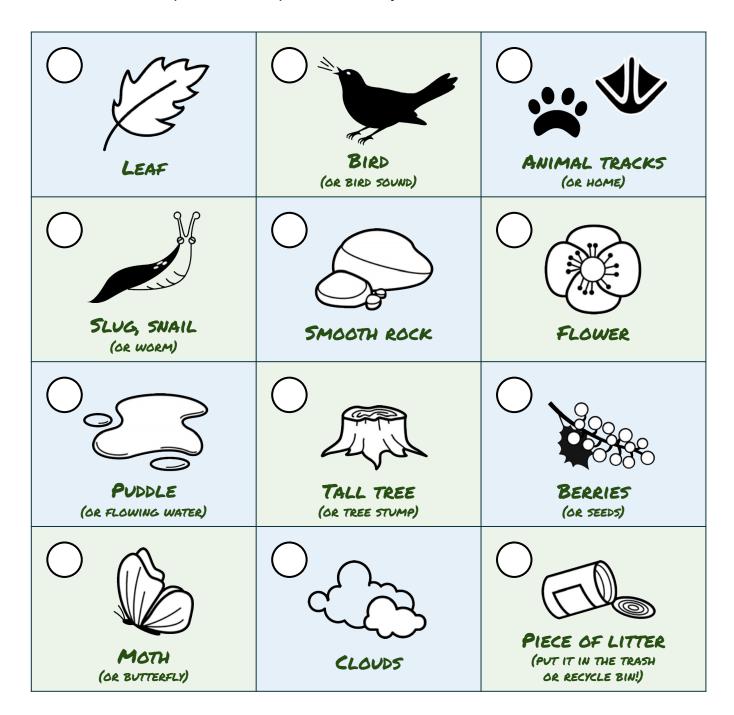
Find the colors of the rainbow in nature. Draw what you find in each box.

RED	ORANGE
YELLOW	GREEN
BLUE	PURPLE
PINK	MULTI



Nature Detectives Scavenger Hunt (Grades 2-4)

Look for these animals, plants, and other parts of nature on your nature walk.





Nature Detectives Scavenger Hunt (Grades 5+)

Look for these animals, plants, and nature objects on your nature walk. Find as many nature objects as you can. BONUS: If you get five in a row, you have a Bingo!



Feedback

This guide will be updated every spring, and we greatly value your feedback and ideas to help us improve!

Whether you want to share your experience using the guide, suggest additional resources or nature destinations, or ask a question, we invite you to share your thoughts and contact us through a brief survey at the link below:

PLEASE CLICK HERE TO PROVIDE FEEDBACK

We would love to see your students enjoying nature! If you post any photos on social media that we can use, please use the hashtag

#ConservationNationAcademy

OR tag us at the following social media handles:

INSTAGRAM: @ConservationNation

FACEBOOK: @BeConservation

TWITTER: @ConservNtn

Learn more about Conservation Nation at

www.conservationnation.org



Acknowledgements



ABOUT THE WRITER: Ambika Anand Prokop

Ambika is a educator and travel writer who specializes in nature and culture education for children. She is the creator of Greenfeet Guides, a world adventure book series that helps kids discover the unique cultures and landscapes of the world.

Before creating Greenfeet Guides, Ambika taught environmental education programs to schoolchildren in Washington DC, created a "Story of Water" curriculum for children in rural India and Singapore, and worked as a stream biologist looking for salmon in the creeks of Seattle, Washington. She has worked in the environmental field since 1995.



www.greenfeetguides.com



ABOUT THE DESIGNER: Raissa Ludwig

Raissa is a graphic designer and (on occasion) illustrator with over 20 years of experience. She has received a regional award in Print Magazine's Design Annual, and multiple awards from the Council for Advancement and Support of Education (CASE) for her work in publication design with Georgetown University and University of Maryland in College Park. She has also worked as a graphic designer for WETA, National Public Radio, and Friends of the National Zoo. Currently she is a full-time graphic designer for the College of Engineering at George Mason University, and continues to freelance.

