

# BLADENSBURG WATERFRONT PARK

## Educational Program Guide



### Tours

#### **River Boat Tours**

Come aboard our pontoon boat for an interpretive riverboat tour of the scenic Anacostia River! Boat tours are around 45 minutes long. Life jackets are provided. Boat tour availability may change due to the weather or river conditions. Boat tours can be added to paid programs for an additional fee. Some programs can be modified to be taught onboard the boat.

#### **B&O Caboose Tours**

Visit the newly renovated B&O Caboose. Students will learn about the various parts of this train car, see the crewman's quarters, sit at the Conductor's desk, climb into the cupola to see the view from up high, ring the train bell, and use their imagination as they explore this 1926 historic B&O Caboose. Caboose tours can be added to programs for an additional fee.

### Science

#### **Animal Characteristics & Adaptations**

**Recommended Grades** Preschool – 4

**NGSS:** LS1.A; LS1.D

All about animals! Discover where animals live, what they eat, how they move, how they adapt to survive, and much more. This fun program will focus on adaptations of reptiles, amphibians, mammals, birds, and fish. Students will explore furs, bones, scales, feathers, models, and other super cool items to enhance their learning experience.

#### **Insect Investigators**

**Recommended Grades** 1 – 4

**NGSS:** 1-LS1-1; 2-LS4-1; 3-LS1-1; 3-LS2-1; 3-LS3-1; 3-LS4-2; 3-LS4-3; 4-LS1-1; 4-LS4-1

Step into the buzzing world of incredible insects and discover how these tiny creatures impact our environment! In this exciting workshop, students dive into the fascinating lives of insects—exploring their life cycles, body parts, communication, cool adaptations, and even their amazing engineering skills. Plus, you'll get up close and personal with live and preserved insects using microscopes, magnifying glasses, and other awesome science tools. Get ready for a hands-on adventure that will change how you see the insect world! Students can have a 30-minute program and a 15-minute hike to search for bugs.

#### **Water & You**

**Recommended Grades** 2 – 5

**NGSS:** 2-ESS2-3; 4-ESSE-2; 5ESS2-2

Water, water, everywhere! Students will explore the components and chemistry of water, the water cycle, water conservation, water safety, freshwater vs salt water, and the importance of water as a natural resource to the survival of plants and animals. Students will make observations about the effects of water in a habitat and the distribution of water on Earth. Students will participate in several fun water science experiments and investigations including density, sink or float, and surface tension.

## **Exploring Natural Resources**

### **Recommended Grades 4 – 6**

**NGSS:** 2-ESS2-3; 4-ESS3-1; 4-ESS2-2; MS-ESS3-3

Students will explore the treasures of the planets by identifying and differentiating between renewable and non-renewable natural resources. Throughout the lesson, they will delve into critical topics such as pollution, recycling, and climate change, developing a deeper understanding of how human activities impact the environment.

Through interactive activities, students will learn how human actions affect natural ecosystems and explore effective steps we can take to mitigate these impacts. As part of the learning experience, students will participate in hands-on experiments simulating oil spills and wildlife rescue scenarios. This fun and engaging activity will allow students to better understand the challenges involved in environmental clean-up efforts and the vital role of protecting wildlife and natural habitats.

## **Gemstones & Geology**

### **Recommended Grades 3 – 5**

**NGSS:** 3-ESS3-1, 4-ESS1-1; 4-ESS2-1 & 2; 5-ESS2-2, 5-ESS3-1, 5-LS2-1, 5-PS3-1

Get ready for an adventure into the dazzling world of crystals, gemstones, and geology! In this hands-on workshop, you'll become a rock detective, using cool tools like microscopes, scales, and blacklights to unlock the secrets of rocks and beautiful gems from all over the globe. Discover the magic of the rock cycle and dive into the world of gems by exploring their color, shine, texture, shape, and mineral makeup! Students will also take home their sparkling gemstone as a special keepsake. It's an experience you don't want to miss!

## **Plants, Cycles, & Interactions**

### **Recommended Grades 4 – 6**

**NGSS:** 2-LS2-1; 4-LS1-1; 5-LS1-1; 5-LS2-1; 5-LS2-1; 5-PS3-1; 5-ESS3-1

It is all about plant life. Students will examine the life cycles and characteristics of plants and gain an understanding of photosynthesis, plant respiration, and energy flow in an ecological system. Students will understand what plants need to grow and why plants are important for the environment. Students will examine various plants and seeds and participate in plant-based science experiments.

## **Weather, Meteorology, & The Climate**

### **Recommended Grades 3 – 6**

**NGSS:** 3-ESS2-1; 3-ESS2-2; 3-ESS3-1; 4-ESS2-1; 5-ESS2-1

What's up with the weather? Students will investigate the major components of weather, the importance of weather to the survival of plants and animals, the water cycle, concepts in meteorology, and learn the difference between weather and climate. Students will be able to understand the patterns in weather over time. Students will gain a better understanding of the cause and effect of human behavior over time on the climate. Students will participate in fun interactive activities and use tools, symbols, and math to measure and interpret the weather.

## **Climate Heroes: Saving the Planet, One Action at a Time!**

### **Recommended Grades 5 -12**

**NGSS:** 5-ESS2-1, MS-ESS2-5; MS-ESS3-5; HS-ESS3-1-6

Students will explore the differences between weather and climate, understanding how climate change impacts human, plant, and wildlife populations, as well as sea levels and regional patterns of temperature and precipitation. Through engaging, hands-on activities, students will learn how natural systems respond to climate change. They will participate in interactive simulation games that incorporate charts, math, and technology to understand the science behind climate change.

In addition to simulations, students can take part in a meaningful, solution-based activity, such as a park clean-up, pedal power activities, build a floating wetland, or native garden plantings. These activities encourage environmental stewardship and foster a sense of responsibility for protecting the natural environment. Students will develop critical thinking skills, collaborate on solutions, and become motivated to take proactive steps toward addressing climate change now and in the future.

## **Wetlands & Watersheds**

### **Recommended Grades 3 – 12**

**NGSS:** 3-ESS3-1; 4-ESS2-1; 5-ESS2-1; 5-ESS3-1

Dive into the fascinating world of wetlands and uncover their vital functions and the crucial role they play in maintaining the health of the Chesapeake Bay, local waterways, and surrounding ecosystems. Students will explore wetland plants and animals, watersheds, pollution, erosion, and other environmental factors that impact these valuable habitats and rivers. As part of this immersive experience, students will participate in a hands-on wetland science experiment, where they will design and build a wetland model. This activity will help them understand key wetland processes and their importance in maintaining ecological balance. The interactive experience will provide students with a deeper connection to their natural environment.

## **Outdoor Nature Discovery**

### **Nature Discovery Walks**

#### **Recommended Grades Preschool – 4**

Students will go on a Naturalist-led nature walk in the park and along the trail to explore ecosystems, wildlife, plants, and more. Field guides, binoculars, nets, critter catchers, scavenger hunts, and other fun supplies are provided so students can fully engage with their surroundings.

### **Wetland Explorers & Boat Tour**

#### **Recommended Grades 4 and up**

**NGSS:** 3-ESS3-1; 4-ESS2-1; 5-ESS2-1; 5-ESS3-1

Students will explore ecosystems from a boat and by land. The study areas will include a boat tour down the river with a stop at the marsh wetlands to explore the ecosystem. Students will use multiple tools such as field guides, charts, water testers, sein nets, binoculars, butterfly nets, and soil study tools. Students will learn about environmental and human factors that impact plants and wildlife ecosystems. These activities boost students' understanding of science, encourage students to become more mindful of their environmental impact, and foster a sense of responsibility for protecting their natural world.

## History / Social Studies

### **The Big Red Caboose Program**

**Recommended for Grades Pre-K – 3; Minimum program fee \$50; Groups welcome.**

All Aboard! Meet us at the imagination station and come aboard. Participants will become train engineers and learn about the B&O caboose and trains. Students will see photographs of trains from the past and compare them to train cars of today. Students will learn how the railroad connects people and goods near and far. The participants can: Build a wooden railway; Use walkie-talkies to communicate with friends; Learn how to use signal flags and bells; Use binoculars to see the surroundings from up high in the cupula; Make a craft or write a special letter.

### **Railroads & Culture**

**Recommended Grades 3 and up**

Students will explore how the railroad influenced settlement patterns and industry in Maryland and the Washington, D.C. areas. They will learn about the geographical features that determined where railroads were built. Through comparisons of past and present photos of towns, buildings, trains, and methods of communication, students will understand how railroads connected people and their goods. They will create a photographic timeline to better understand how railroad transportation has evolved and analyze Maryland's unique role in the growth of railroad transportation in the United States. Students will visit the newly renovated historic B&O Caboose.

### **Native American Culture of the Eastern Woodlands Peoples**

**Recommended Grades 3 – 12**

Students will explore the ancient life of Eastern Woodland Native Americans. Using maps and data, they will analyze settlement patterns and learn about native traditions that still influence modern life. Additionally, they will evaluate early interactions between the Native Americans and the European colonists in St. Mary's City and the region. The lesson covers lifestyle, food, clothing, and cultural practices and challenges. Students will engage in hands-on activities like grinding plants, examining cultural items, playing native games, and exploring musical instruments.

### **The War of 1812 & Battle of Bladensburg**

**Recommended Grades 5 and up**

Students will learn about the War of 1812 through an engaging presentation. They will explore the domestic and foreign causes of the war, understand the geographic and military factors that contributed to the American loss at the Battle of Bladensburg, and explore the eventual American victory over the British. The program will highlight the significance of the war's outcome for the United States. Students will examine various items reflective of the historical period.