

2020-2021 Education Programs for Grades PreK-12

**Blandy Experimental Farm
an Ecology Research Station of the
University of Virginia**

See page 2 for
COVID-19
information on our
outdoor-based field
experiences.



Hands-on, *STEM* learning in our outdoor classroom



We welcome public, private, and home schools.

**For more information call (540) 837-1758 Ext. 242
or e-mail schprog@virginia.edu**



Blandy's Education Programs during the COVID-19 pandemic

Flexible-Innovative-Adaptable. These three words sum up all educators' approach to instruction at this time. Us too! This summer we asked teachers what remote learning resources we could provide to meet teacher and student needs.

Teachers identified four high-need areas:

- How-to videos for schoolyard/home field investigations
- Blandy educators joining your classroom in a Live Stream
- Remote content/activities for teaching science concepts, and
- Science learning kits for use at school or at home

We are ready to help you meet your learning objectives by adapting our program elements in any of these four ways for your hybrid or remote learning environments.

For classes who opt to come to Blandy for field experiences, our top priority is to create a safe environment for all our students, teachers, and staff while providing engaging outdoor, science-based learning experiences. We are following [CDC recommendations](#), [VDOE's Return to School Plan](#), & [UVA safety policies](#). We will use outdoor instructional spaces exclusively and will modify program elements in order to keep safe distancing and allow for sanitization. Program requests will be evaluated on a case-by-case basis.

Please contact us at schprog@virginia.edu or 540-837-1758 ext. 290 to discuss how we can help meet your education needs this school year. (Provide available dates/times when leaving a voice message.) You can also contact us to discuss how outdoor education can support teaching and learning during this time (see below for guidelines from the North American Association for Environmental Education).

NAAEE recommends in their [EE Guidance for Reopening Schools](#) that:

"There are several specific areas where environmental and outdoor education programs can help schools, students, teachers and families. The following areas are expanded upon below:

- ⇒ Extending and Expanding Learning Spaces into the Community
- ⇒ Using the School Grounds for Learning
- ⇒ Supporting Teaching and Learning
- ⇒ Creating Healthier Learning Environments
- ⇒ Virtual Teaching and Learning
- ⇒ Supporting At-Home Learning"

NOTE TO EDUCATORS:

Blandy Experimental Farm Education programs:

- ◆ Correlate with Virginia Standards of Learning
- ◆ Align with the Next Generation Science Standards
- ◆ Emphasize Hands-On, Experiential Learning
- ◆ Are Grade Level Targeted & Discipline Integrated
- ◆ Develop 21st Century skills
- ◆ Incorporate Elements of STEM
- ◆ Provide Environmental Literacy Connections
- ◆ Generate student interest in career possibilities

Blandy programs provide meaningful watershed education field experiences for your students at all age levels. As part of the 2014 Chesapeake Bay Watershed Agreement, school divisions are to provide:

“at least one meaningful watershed educational experience in elementary, middle and high school depending on available resources.”

A visit to the State Arboretum of Virginia provides authentic learning in an outdoor setting. Our programs feature hands-on learning and investigations to provide children positive and meaningful experiences with the natural world. We are dedicated to engaging your students in exciting place-based science investigative experiences!

All of our programs are designed to meet Virginia Standards of Learning (SOL) requirements; science and math standards are listed in the descriptions. Most programs are offered for a range of grades; rest assured that activities are tailored to your specific grade visiting. We use an integrative scientific approach: our activities incorporate science and math, develop technology and engineering skills, and apply 21st century skills (5Cs). All programs are designed to support your classroom teaching; they can be used to introduce new concepts, enhance current lessons, or review a unit. We look forward to participating with you in providing the best possible STEM learning for your students!

Our facilities include:

- ◆ A variety of outdoor learning locations including wetlands, woodlands, meadows, and gardens:
 - ⇒ Three classrooms: Parkfield Learning Center, Peetwood Pavilion for Environmental Education, and Blandy Community Classroom
 - ⇒ 175-acre Arboretum collection with over 1000 species of trees, shrubs, and herbaceous plants
- ◆ Essential infrastructure:
 - ⇒ Designated School Bus Parking area
 - ⇒ Picnic area with tables (seats about 80)
 - ⇒ Wheelchair-accessible restrooms in all teaching and public structures

Program Structure

For 3 to 5 classes visiting Blandy:

Classes rotate through several activity stations. During rotations, Blandy educators and teachers share the responsibility for leading students through the program activities. Rotation schedules are:

- ◆ Set up as a series of stations that classes move through using a predetermined schedule
- ◆ Planned for maximum student engagement & designed to enhance students' learning experiences
- ◆ **Arrival time is 9:40 a.m. for program briefing & restroom visits. Departure times vary based on your schedule.**

For 1 to 2 classes visiting Blandy:

Programs are 75 minutes unless otherwise stated in the program description. Three time slots are available (10:00 a.m., 11:30 a.m., and 1:30 p.m.).

To see our Programs at a Glance, go to pages 8-9.

FIELD INVESTIGATION REGISTRATION

To request a program go to:

<http://www.blandy.virginia.edu/education/registration>

Program Registration:

Use the link above to make your registration request online.

A few important notes about registering:

- ◆ Please provide the most accurate, anticipated attendance numbers for each program as well as each teacher's name and email address to help us prepare for your visit(s).
- ◆ Once you have submitted a registration request, you will receive an email to confirm the program date and time requested or suggested alternative dates. You must respond to this email within 48 business hours to confirm your registration.
- ◆ Call us at 540-837-1758 Ext. 242 with any questions you have about program structure, content, registration assistance, etc.



Class size: Minimum class size for a program is 10 students. For groups spanning several grade levels, limit your group to three consecutive grades, e.g. grades 3, 4, & 5 or K, 1, & 2. Please refer to page 2 for program structure details.

Cancellation Fee: Programs will be held rain or shine, except for **severe weather**. If weather conditions are questionable, we will contact you. Cancellation within 3 weeks of your scheduled date will result in a charge of the minimum program fee (equivalent to ten students) per class per program booked. (E.g., the cancellation fee for one class of *Let's Sprout* at \$4/student would be \$40. The cancellation fee for three classes of *Watershed Investigations* at \$6/student would be \$180).

Chaperones: There is no charge for adult chaperones up to 1 per 4 children. **Additional chaperones will be charged** as participants in the program. Exceptions to the maximum chaperone limit are adults assisting students with special needs and teacher assistants. **Our requested adult to student ratio** is 1:5 (preK-5th), 1:7 (6th- 8th) and 1:9 (9th-12th). All chaperones must be registered and approved per the visiting school's policy. Click here for our [Chaperone Guidelines \(PDF\)](#).

Special Needs: Please advise us if you have students with special needs (i.e. allergies, physical limitations, behavioral or developmental exceptionalities, etc.). This information will allow us to make every effort to accommodate your students needs. NOTE: We are not able to provide on-site transportation for students with crutches or other physical limitations.

Content Connection: Maximize your students' experiences at Blandy! Call or email us to schedule a program preview. For most programs we provide resources that can be **used in your classroom to reinforce or introduce program content**.

Access these resources at: <http://blandy.virginia.edu/education/education-resources>. We also recommend excellent, program-specific **fiction and non-fiction texts** and suggested intercurricular activities: <https://sites.google.com/site/blandyvirginia/education/Literacy>

Be Prepared: As our activities are outdoor based, activity location(s) may change to maintain a safe learning environment for students and teachers. Blandy Education Instructors maintain adult and child first aid/CPR/AED certifications.

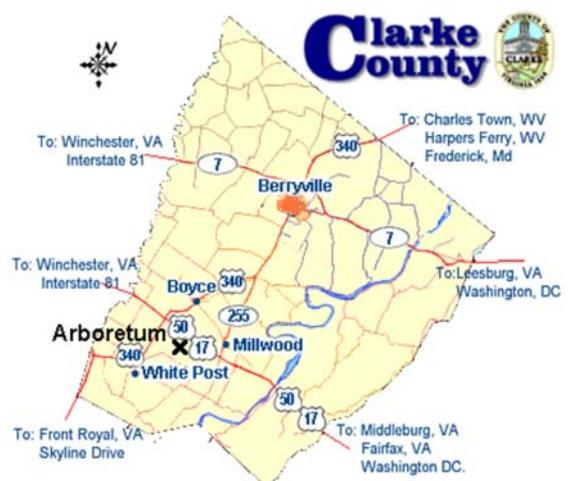
Restrooms: Allow 20 minutes for your entire class to visit the restroom. Restrooms are located in our Quarters Building and Peetwood Pavilion.

Picnic Grove: Seats about 80 people. First-come, first-serve basis; no reservations are taken.

Who is in charge?

Teachers and Chaperones are expected to manage students behavior at ALL times. Please abide by [arboretum rules and etiquette \(PDF\)](#).

[Click here for Directions](#)



Early Elementary (preK-2nd)



Early Explorers: Terrific Trees (preK- K)

Young scientists get up close and personal with sensory examinations of tree shape and structure! Use pattern recognition, emergent literacy, and listening skills to discover the animals that live in and on trees. Practice motor skills while creating leaf shapes crafts and exploring the grounds of the Arboretum.



VA Foundation Blocks for Early Learning

Science Block 1, 3, 4, 6 Mathematics Block 3, 4, 5, 6
Science SOL: K.1, K.3, K.5, K.6, K.7, K.9 Math SOL: K.8, K.11, K.12, K.16
Fee: \$4 per student



Mammals (preK-2nd)

Students learn about Virginia mammals native to the Chesapeake Bay Watershed. We investigate mammal life needs and use critical thinking to analyze and compare mammal tracks, applying geometry and counting skills. Students explore Blandy looking for evidence of mammals and submit findings to the citizen science program, Project Squirrel. This program also focuses on the senses mammals use to find food, seek prey, and define territories.



Science SOL: K.1, K.5, K.6, K.7, K.9; 1.1, 1.5, 1.7; 2.1, 2.4, 2.5, 2.7
Math SOL: K.2, K.4, K.11, K.13; 1.7, 1.12, 1.13, 1.14; 2.1, 2.4, 2.12, 2.13, 2.15, 2.17
Fee: \$4 per student



Let's Sprout (K-2nd)

The imagination of your budding young scientists will be captured as they explore the wonders of germination and plant growth. We investigate plant life cycles through models. Scientific observations are conducted and results are communicated. Outdoor exploration of the plant world reinforces student understanding of plant parts, functions, and roles in the watershed. Students select appropriate tools for planting seeds and provide care for their seeds.



Science SOL: K.1, K.5, K.6, K.7, K.9, K.10; 1.1, 1.4; 2.1, 2.4, 2.8
Math SOL: K.2, K.11, K.12 K.13; 1.13, 1.14; 2.1, 2.4, 2.15, 2.16
Fee: \$4 per student

What teachers say about our programs:

“Many thanks! Everything was so well organized, content was relevant to curriculum, and you made learning fun for the kids! Top notch all around.”

Program Seasonality

Ideal   

Successful   

Fall Winter Spring

Elementary (2nd – 4th)



It's for the Birds (2nd-4th)

Birds have adaptations that allow them to survive in a multitude of environments in a watershed. Students consider strategies that help birds secure shelter and find food, and explore how bird beaks are adapted for gathering and eating specific foods. Outdoors, fledgling ornithologists use binoculars to observe birds in their natural habitats, and collect data to interpret and share in citizen science projects as part of civic responsibility. This program is available year round!



Science SOL: 2.1, 2.5, 2.7; 3.1, 3.4, 3.5, 3.8; 4.1, 4.3, 4.8

Fee: \$4 per student



Incredible Insects (2nd-3rd)

Explore the diversity of crawling, flying, and hopping insects with this program! Students discover insect survival mechanisms, such as mimicry and camouflage. They investigate insect life cycles and use magnification tools to examine insects up close and personal. Young entomologists develop an appreciation for the diversity of insects in our watershed habitats as they collect data and communicate their observations about insects and non-insects.



Science SOL: 2.1, 2.4, 2.5, 2.7; 3.1, 3.4

Math SOL: 2.15, 2.16; 3.15, 3.16

Fee: \$4 per student



Virginia Natives (3rd-4th)

Students evaluate Virginia's native food webs and energy flow in watershed systems as they investigate the relationships among producers, consumers, and decomposers in the forest layers of the Arboretum's Native Plant Trail habitat. Students apply critical thinking skills collecting and analyzing data on native and non-native organisms. Through observations and sketches, your ecosystem scientists collaborate to investigate interdependencies and organism interactions within their ecosystem.

Science SOL: 3.1, 3.4, 3.5; 4.1, 4.2, 4.3, 4.8

Math SOL: 3.3, 3.15, 3.17; 4.7, 4.14



Fee: \$4 per student

Program Seasonality

Ideal   

Successful   

Fall Winter Spring

What teachers say about our programs:

“This was a wonderful experience for the students - they loved it! It was a great supplement to our watershed curriculum. It was very organized and the staff were enthusiastic and engaging.”

Upper Elementary (3rd-5th)



Scoop On Soils (3rd)

With this investigative program, students realize that soil is more than just dirt! The science process skills of data collection, measurement, observation are reinforced. In collaborative groups, your soil scientists conduct an experiment to test soil porosity and explore soil particle size during a kinesthetic game. In the field, we examine and identify different soil layers and look for evidence of organisms living in the soil. Observe evidence of erosion, and discuss potential implications in the watershed.

Science SOL: 3.1, 3.6, 3.8

Math SOL: 3.1, 3.3, 3.7, 3.9, 3.15, 3.17

Program Seasonality

Ideal



Successful



Fall Winter Spring



Fee: \$4 per student



Snake Savvy (3rd-4th)

As long as you know about snakes, there is no reason to be wary of them! Developing herpetologists use non-fiction resources to investigate snakes. Students compare characteristics that differentiate Virginia's venomous and non-venomous snakes. They measure and compare the lengths and patterns of snakes, then communicate their knowledge. Students also study how snakes use behavioral adaptations such as mimicry, camouflage, and temperature regulation to thrive in their habitats.

Science SOL: 3.1, 3.4, 3.5; 4.1, 4.2, 4.3, 4.8

Math SOL: 3.1, 3.7; 4.8



Fee: \$4 per student



Flower Functions (4th)

Learn about the mysterious world of flowers and their structures and functions. Watch students become botanists as they observe and dissect flowers using hand lenses and microscopes to unlock floral structure. Outside, they discover and collect flower and pollinator data as they examine the fascinating adaptations plants and their animal partners have developed with one another. Using critical thinking skills, they interpret the data they have collected. Students develop appreciation for the diversity of flowers in the Chesapeake Bay Watershed.

Science SOL: 4.1, 4.2, 4.3, 4.8

Math SOL: 4.15, 4.5



Fee: \$4 per student



Rocks Talk! (5th)

What do the rocks at the Arboretum tell us about the geologic history of the Chesapeake Bay watershed? Student geologists identify the geographic distribution of Virginia rock resources and the distinctions among igneous, metamorphic, and sedimentary rocks. Collaborating in teams, students carry out rock density investigations. Outdoors, they look for evidence of tectonic plate movement, weathering, and erosion.

Science SOL: 5.1, 5.7

Math SOL: 5.1, 5.4, 5.9



Fee: \$4 per student

| Program | Science Topic | Science SOL (2018) | Technology | Engineering | Mathematics | Grade | Career Connections | <u>Next Generation Science Standards</u> |
|---------------------------|--|--|---|---|--|--------------|--|---|
| Early Explorers | Observations & Investigations | PreK Science Block 1, 3, 4, 6 ; K.1, K.3, K.5, K.6, K.7, K.9 | Hand lenses | Observation & Measurement | Patterns, Shapes | preK– K | Scientist | |
| Mammals | Animal Life | K.1, K.3, K.5, K.7; 1.1, 1.5, 1.6, 1.7; 2.1, 2.4, 2.5, 2.7 | Identification Guides, Rulers (Metric & | Observation & Measurement, Models | Geometry, Graphs  | preK– 2 | Vet, Zookeeper, Farmer, Wildlife Rehabilitator | LS1.A, LS1.B, LS1.C, LS1.D, LS3.A, LS4.D |
| Let's Sprout | Life Processes & Needs | K.1, K.5, K.6, K.7, K.9, K.10; 1.1, 1.4; 2.1, 2.4, 2.8 | Hand lenses, Planting Tools | Problem Solving using Tools | Patterns, Data | K-2 | Plant Biologist, Chef, Landscaper, Farmer | LS.1A, LS1.B, LS1.C, LS2.A, LS3.A, LS4.D |
| It's for the Birds | Adaptations of Organisms | 2.1, 2.5, 2.7; 3.1, 3.4, 3.5, 3.8; 4.1, 4.3, 4.8 | Binoculars | Field Observations |  | 2-4 | Educator, Ornithologist, Environmental | LS1.A, LS1.B, LS2.C, LS3.B, LS4.C, LS4.D |
| Incredible Insects | Diversity of Life; Life Cycles | 2.1, 2.4, 2.5, 2.7; 3.1, 3.4, 3.8 | Microscopes, Insect nets, Collection jars | Insect Modeling | Patterns | 2-3 | Entomologist, Bee Keeper, Pest Management | LS1.A, LS1.B, LS1.D, LS4.D |
| Virginia Natives | Food Webs and Ecosystems | 3.1, 3.4, 3.5, 3.8; 4.1, 4.3, 4.8 | Hand lenses, Metric rulers | Interpreting information using models & sketches | Graphing, Measuring, Data Collection & Analysis | 3-4 | Landscape Architect, Documentary Filmmaker, | LS2.A, LS2.C, LS4.C, LS4.D; ESS3.C |
| Scoop on Soils | Soil Science | 3.1, 3.6, 3.8 | Beakers, Stopwatch, Digital Scales, Graduated | Data Analysis & Models | Measurement & Data collection | 3 | Soil Specialist, Ceramic artist, Building Contractor | ESS2.A, ESS2.E |
| Snake Savvy | Animal Behavior | 3.1, 3.4; 4.1, 4.2; 5.1, 5.5 | Identification guides, Maps, Standard & Metric rulers | Biomechanics  | Number Sense, Measuring, Probability | 3-4 | Herpetologist, Customs agent, Wildlife rehabilitator | LS1.A, LS1.D, LS4.C, LS4.D |

| Program | Science Topic | Science SOL (2018) | Technology | Engineering | Mathematics | Grade | Career Connections | <u>Next Generation Science Standards</u> |
|--|--|---|---|---|---|--------------|---|--|
| Flower Functions | Flower Structure & Function | 4.1, 4.2, 4.3 | Microscopes, Hand lenses, Metric rulers |  | Fractions, Factors, & Patterns | 4 | Botanist, Florist, Botanical illustrator | LS1.A, LS1.B, LS1.C, LS4.D |
| Rocks Talk | Rocks, Geology | 4.1, 4.8; 5.1, 5.8 | Streak Plates, Hand Lenses, Digital scales, Dichotomous Key | Map Skills | Multistep problem solving, measuring | 5 | Stone carver, Miner, City Planner, Geologist | ESS1.C, ESS2.A |
| Watershed Investigations (MWEE) | Watershed Science | 6.1, 6.6, 6.8, 6.9 | Microscopes, Dichotomous keys, Thermometers, Turbidity tubes | Analyzing Systems | Computation | 6 | Fisheries Biologist, Water & Sewer Technician, Agricultural Engineer, Hydrologist | LS2.A, LS2.C, LS4.C, LS4.D; ESS2.C, ESS3.A, ESS3.C |
| Arbor Sleuth | Classification & Identification | 5.1, 6.1, 7.1  | You are can register for Arbor Sleuth or Young Ecologists as well as build your own program from the activities listed on page 9 . (a la carte). | | Measurement | 6-8 | Forester, Urban Planner, Carpenter, Tree Care Professional | LS1.A, LS4.D, LS3.A, LS3.B |
| Young Ecologists | Interdependency of Life | LS.1, LS.3, LS.5, LS.6, LS.7, LS.8, LS.10, LS.11 | | | Proportions  | 7 | Ecologist, Restoration Scientist, Landscape Architect, Filmmaker | LS2.A, LS2.B, LS2.C, LS4.B, LS4.D |
| Water Quality Technology (MWEE) | Watershed Science | ES.1, ES.8; BIO.1, BIO.2; CH.1 | Hand-held Colorimeter | Interdependence of Science, Engineering, & Technology | Data Collection & Analysis | 9-12 | Wastewater manager, River Monitor, Water well and irrigation engineer | LS2.C, LS4.D; ESS2.C, ESS3.A, ESS3.C |
| Science Explorations | Scientific Process | 6.1, LS.1, Ch.1, BIO.1 | Variety of observing & measuring tools | Experimental Design | Data Collection, Analysis, & Modeling | 9-12 | Varies with Program | Science & Engineering Practices 1-8 |
| | | | | | | | | |
| Self-Guided Backpacks | Exploration of the Natural World | | Observation Tools | Investigation, Problem Solving | Patterns, Measuring | All | | |

Middle School (6th–8th)



Watershed Investigations (6th)

Students assess the health of Blandy's aquatic systems as they collect, measure, record, and analyze abiotic water quality indicators such as temperature, turbidity, pH, and nitrates. By identifying and analyzing aquatic macroinvertebrates your watershed scientists develop an understanding of the health of the wetlands. An analysis of the physical site adds context and a sense of stewardship to this meaningful watershed educational experience field investigation.

Science SOL: 6.1, 6.5, 6.7, 6.9 Math SOL: 6.6

Fee: \$6 per student



Young Ecologists (7th)

On the road to becoming ecologists, students investigate our replica skull collection to explore how specific traits influence individual and population behaviors. Using critical thinking, they assess the biotic and abiotic factors of a wetland environment, determine an organism's role in a watershed system, and if that ecosystem can support particular organisms. Your young ecologists develop a meaningful understanding of habitat, diversity, and biological interdependence.

Science SOL: LS.1, LS.6, LS.7, LS.8, LS.9, LS.10, LS.11, LS.13 Math SOL: 7.1

A La Carte Activities Middle School (6th - 8th)

Build your own program by selecting 2-3 activities

Each activity runs a minimum of 45 minutes. For groups of more than 3 classes, a lunch station can be added. Please select your activities when registering. Questions? 540-837-1758 x242 schprog@virginia.edu

Fee: \$6 per student



Tree Identification

What are the important features that distinguish one tree family from another? Students hone their observation skills as they explore the Arboretum using hand lenses and dichotomous keys to identify mystery trees.

Science SOL: LS.1, LS.3, LS.4



American Chestnuts

Through modeling and observation, students learn about the economic and ecological significance of the American chestnut, past, present and future. They explore restoration efforts and the hybrids at Blandy.

Science SOL: LS.1, LS.6, LS.7, LS.8, LS.11

History: US1.2, US1.5, USII.2, CE.1, CE.11



Skull Identification

Students investigate our replica skull collection to explore how specific traits influence individual and population behaviors. Students measure and analyze the skull, then they identify it using a dichotomous key.

Science SOL: LS.3, LS.7



Chestnut Genetics

Students learn about efforts to create a blight-resistant chestnut. They model the genetic outcome of using selective breeding between American and Chinese chestnut trees. At each step, they calculate the proportion of genes from each lineage.



High School (9th-12th)



Water Quality Technology (9th-12th)



This Meaningful Watershed Education Field Experience focuses on measuring water quality indicators using technology. Environmental scientists use hand-held colorimeters to explore the effects that temperature, pH, dissolved oxygen, nitrate, and other indicators have on water quality. Students evaluate their results and communicate their water quality assessment with others. Assessments can be shared with your local community to exercise civic responsibility. This program is for motivated students. It is designed to take three hours in groups of no more than 15.

Science SOL: ES.1, ES.8; BIO.1, BIO.2, CH.1

Fee: \$6 per student



Science Explorations (9th-12th)



A day-long investigation! Student researchers use critical thinking to conduct scientific investigations as they: define a problem, develop a hypothesis, interpret data, and communicate their results. Previous explorations include: animal and plant adaptations, the effect of abiotic factors on lichen, and the impact of non-native species in a wetland. Call (540) 837-1758 Ext. 242 to discuss possibilities. *This program is scheduled from 9 a.m. to 2 p.m.*

Science SOL: BIO.1, CH.1 and others depending on the inquiry chosen

Math SOL: A.6; PS.1, PS.2, PS.3, PS.8, PS. 9, PS.10

Fee: \$9 per student



High School Research- You may choose a targeted all day investigation for your high school students. Choose from:

Soil pH and Moisture- Use a transect survey method to test and map soil characteristics.

Impacts of Invasive Species- Conduct a research plan to uncover effects on biodiversity and ecological structure of ecosystems.

Pollination and Questioning Strategies- Science process driven study of how to develop and investigate observational field studies.

Field Collection and Data Analysis Techniques- Developing survey methodology and analysis of data to calculate diversity.

Science and Math SOL vary with each option.



What teachers say about our programs:

- ◆ “The material presented was geared right to the level of our children. We felt that our children (and the adults) learned a lot and we'll be eager to return again. Thanks for creating such an informative and engaging program!”
- ◆ “You can tell the instructors love their job, working with children, and they give the students an added excitement toward that subject area!”

Program Seasonality

| | | | |
|------------|------|--------|--------|
| Ideal | | | |
| Successful | | | |
| | Fall | Winter | Spring |

Self-Guided Backpack Programs

Interested in a self-guided exploration of Blandy and the Arboretum?

Reserve a backpack full of engaging, self-directed activities! We have four backpack themes. A themed set consists of six identical backpacks with activity instructions, equipment, and all necessary materials. Each identical backpack in a set is intended for chaperoned groups of 6 students, meaning one backpack set can accommodate up to 36 students total.

Use the on-line program registration system to reserve a set of backpacks for your class. For more information, contact schprog@virginia.edu Fee for each Backpack Set: \$15



Secrets of the Garden

Early Elementary (K-4)

Updated
for 2020!

Study the plants, trees, and herbs at Blandy to explore tree and plant life cycles, plants and how they rely on pollinators like bees, plant uses, as well as organism life needs. Students use Peterson Flash Guides, hand lenses, and observation skills. Activities include an arboretum nature scavenger hunt, a close, hands on look at tree slivers (or cookies), a couple games about plants and trees, a leaf rubbing pattern and shape study, and a story about the importance of bees for plants.



Use Some Sense

Pre-School & Kindergarten

Develop students' senses as they observe the natural world. Hands-on activities include: Leaf texture scavenger hunt; exploring primary and secondary colors using color paddles; practice reading and listening skills with the *Butterfly Alphabet* book; and more!



WILD THINGS!

Grades 4-7

Observe the wildlife that makes their home at the Arboretum! Using Peterson Flash Guides, binoculars, and hands-on activities, students hone observation and identification skills as they look for wildlife signs, learn about animal adaptations and disguises, and discover how ecosystems depend on all living things. Activities include an arboretum scavenger hunt, birds and worms relay, stories, and a close up hands-on study of deer antlers, hides, and tracks.

Updated
for 2020!



EARTH TALKS

Grades 6-8

Through geologic explorations, your students examine rocks and soils of Blandy with identification guides and hands-on investigations. They learn about Virginia fossils and the geology that shaped our world today.

What's New?

Field investigations are more meaningful to students when integrated into their curriculum across all content areas, helping students to access their learning experiences in new ways. A variety of learning opportunities helps translate short-term knowledge into deep, long-term memory storage.

Read below to learn about our recent program enhancements!

Program Clusters

Our cross-curricular modules embed outdoor learning into the school classroom in order to:

- ⇒ Introduce ecological concepts,
- ⇒ increase depth of knowledge by synthesizing a variety of components in a systems approach,
- ⇒ review and reflect on concepts.

Literacy Connections

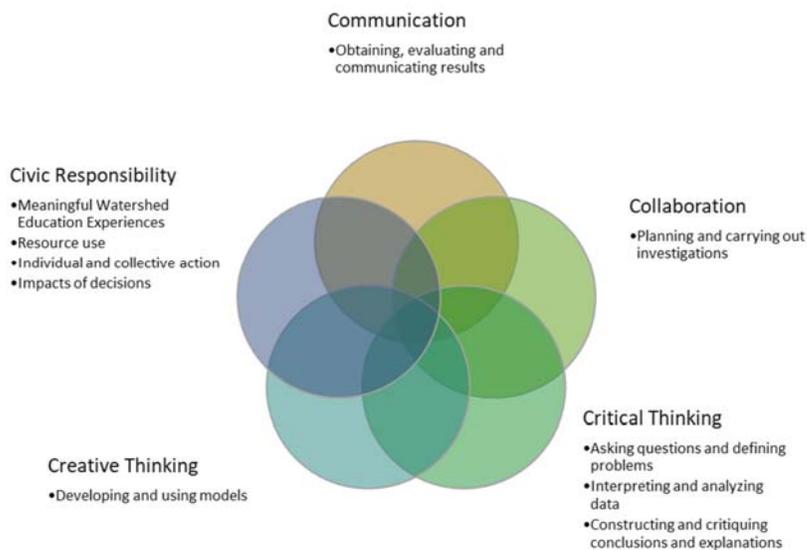
To help provide your students with meaningful access points to scientific content while bridging the field and your classroom, we have curated a collection of recommended literacy resources and suggested activities (<http://blandy.virginia.edu/education/Literacy>). Texts at multiple reading levels were selected so that all students may access the content. This collection will grow as we identify additional resources.

21st century skills

Defined as, "...a set of abilities that students need to develop in order to succeed in the information age."¹ 21st century skills are at the forefront of education. These learning and innovation skills, essential to functioning in an ever-changing world, are integral to the Virginia Board of Education's Profile of a Virginia Graduate and the Next Generation Science Standards.

Our programs address core content areas, Virginia's 5Cs, and various 21st century themes (among them global awareness, civic literacy, and environmental literacy). "The best learning occurs when basic skills are taught in combination with complex thinking skills."²

Use Blandy field investigations as performance assessment tools, as part of a project-based unit, or to focus on life and career skills. Our programs help your students connect outdoor field studies with their classroom learning as they apply skills and knowledge during scientific investigations.



¹ <https://k12.thoughtfullearning.com/FAQ/what-are-21st-century-skills>. Accessed 7/18/2019.

² Silva, Elena. (2009). Measuring Skills for 21st-Century Learning. Phi Delta Kappan. 90. pp 630-634.