2025-2026 PreK-12 Education Programs

at UVA's Blandy Experimental Farm

& the State Arboretum of Virginia

Inspiring curiosity and connections through experiential outdoor learning

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
- Develop Science and Engineering Practices
- Incorporate Elements of STEM
- Provide Environmental Literacy Connections
- Generate student interest in career possibilities

For more information call 434-243-3611
or e-mail schprog@virginia.edu

FIELD INVESTIGATIONS @ BLANDY

To request a program go to: blandy.virginia.edu/sign-field-trip

- Please provide the most accurate, anticipated attendance numbers, accommodation requests, and 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 to suggest alternative dates. You must respond to this email within 48 business hours to confirm your registration.
- Call or email us with questions 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.

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.

Chaperones: **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).

Content Connection: Maximize your students' experiences at Blandy! Call or email us to schedule a program preview. We provide program clusters and other resources that can be **used in your classroom to reinforce and introduce program content.** Access these resources at: https://blandy.virginia.edu/programs-students-and-teachers

Who is in charge?
Teachers and Chaperones are expected to manage students behavior at ALL times. Please abide by https://blandy.virginia.edu/guidelines-and-policies

Our facilities include:

- ⇒ A variety of outdoor and indoor learning locations including wetlands, woodlands, meadows, and gardens
- ⇒ 172-acre State Arboretum of Virginia within our collection with over 1000 species of trees, shrubs, and herbaceous plants
- ⇒ Designated School Bus Parking area
- ⇒ Picnic area with tables (seats about 100)
- ⇒ Wheelchair-accessible restrooms in all teaching and public structures
- ⇒ Water fountains or water refill stations

Program Structure

Upon registration, we will work with you to send a sample schedule for your number of classes, arrival time, anticipated departure time, and other details.

Fee Schedule	
Elementary	$4 (except 4th grade Watershed at $6)
Middle	$6
High	$9

What teachers say about our programs:
"The programs at Blandy are TOP NOTCH and encourage critical thinking as well as collaboration. We love that they are open ended and involve the scientific method as well as working together as a team to complete activities and challenges."

Elementary

Early Explorers: (preK) Choose a theme

Terrific Trees: Young scientists get up close and personal with sensory examinations of tree shape and structure! Students use pattern recognition, emergent literacy, motor skills, and listening skills to discover the animals that live in and on trees.
Meadow Discovery: Your students connect with nature as they engage in hands-on activities using their senses, moving like animals, recording observations through art work, and verbal skills to investigate a meadow habitat and its plants and animals.

VA Early Learning & Development Standards
APL1.1, APL3.1, APL3.3, SED3.1, CD3.5, CD3.4, CD1.2, CD1.1, HPD3.1, CLLD1.3, CLLD1.2

Mammals (K–2nd)

Students investigate mammal life needs and use critical thinking to analyze and compare mammal tracks, and apply geometry and counting skills. Students observe and explore evidence of mammals as they contribute to a community science program. This program also focuses on the senses mammals use to find food, seek prey, and define territories.

Science SOL: K.1, K.3, K.5, K.7; 1.1, 1.5, 1.7; 2.1, 2.4, 2.5, 2.7
Math SOL: K.NS.1, K.MG.1, K.MG.2, K.PS.1, 1.NS.1, 1.MG.1, 1.MG.2 1.PS.1, 2.NS.1, 2.MG.3, 2.PS.1
English SOL: K.C.1, K.FFR.2, K.R.1, K.RV.1, 1.C.1, 1.R.1, 1.RV.1, 1.FFR.2, 2.C.1, 2.FFR.2, 2.RV.1

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 and outdoor exploration of the plant world reinforces student understanding of plant parts, functions, and roles in the watershed.

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.NS.1, K.PFA.1, K.PS.1, 1.PS.1, 1.NS.1, 1.PFA.1, 2.PFA.1, 2.NS.1 ,2.PS.1,
English SOL: K.C.2, K.LU.1, K.FFW.1

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 investigate how bird beaks are adapted for gathering and eating specific foods. Fledging ornithologists use binoculars to observe birds in their natural habitats, and collect data to share in community 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
English SOL: 2.C.1, 3.C.1, 4.C.1, 2.RV.1, 3.RV.1, 4.RV.1
Social Science: VS.1

Elementary

Incredible Insects (2nd-3rd)

Young entomologists 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. Students develop an appreciation for the diversity of insects in our watershed as they collect data and communicate their observations.

Science SOL: 2.1, 2.4, 2.5, 2.7, 2.8; 3.1, 3.4, 3.8
Math SOL: 2.PFA.1, 3.PFA.1
English: 2.C.1, 3.C.1

Vivid Virginia (3rd-4th)

Ecosystem scientists investigate organism interactions and interdependencies and evaluate Virginia's food webs and energy flow in watershed systems as they investigate the relationships among producers, consumers, and decomposers in the Arboretum's Native Plant Trail habitat. Students collect and analyze data on native and non-native organisms.

Science SOL: 3.1, 3.4, 3.5, 3.8; 4.1, 4.2, 4.3, 4.8
Math SOL: 3.PS.1 3.PFA.1, 4.PS.1, 4.PFA.1
English SOL: 3.C.1, 3.RV.1, 3.LU.1, 3RI.3, 4.C.1, 4.RV.1

Scoop On Soils (3rd)

With this investigative program, students realize that soil is more than just dirt! Science practices of data collection, measurement, and 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 investigate soil's role in the ecosystem.

Science SOL: 3.1, 3.6, 3.8
Math SOL: 3.CE.1, 3.MG.1, 3.MG.3, 3.PS.1
English SOL: 3.C.1, 3.RV.1, 3.RI.1, 3.RI.3

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. They measure and compare the lengths and patterns of snakes, then communicate information they have learned. Students 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.MG.1, 4.MG.1
English SOL: 3.RV.1, 4.RV.1, 5.RV.1

Elementary & Middle

Flower Functions (4th)

Learn about the fascinating world of flowers and their structures and functions. Botanists observe and dissect flowers using hand lenses and microscopes to unlock secrets of floral structure. Outside, they discover and collect flower and pollinator data investigating plant adaptations. Students develop an appreciation for the diversity of flowering plants in the Chesapeake Bay Watershed.
Science SOL: 4.1, 4.2, 4.3, 4.8
Math SOL: 4.MG.1
English SOL: 4.C.1

Watershed Investigations (4th)

During their field investigation, students develop an understanding of connections to the Chesapeake Bay Watershed and how they can affect it. Students design and engineer a filtering system to remove sediment from water, determine if an organism's life needs can be met in a wetland habitat, infer how the organism may be affected by soil erosion and pollution, and conduct field observations of land use to consider the land use impacts on the watershed system.

Science SOL: 4.1, 4.3, 4.8
Math SOL: 4.PS.1
English SOL: 4.R.1, 4.C.1, 4.RI.1

Rocks Talk! (5th)

Student geologists identify Virginia rock resources and the distinctions among igneous, metamorphic, and sedimentary rocks. Collaborating in teams, students use mathematics to carry out rock density investigations. They look for evidence of tectonic plate movement, weathering, and erosion.

Science SOL: 5.1, 5.8
Math SOL: 5.MG.1, 5.PFA.2, 5.CE.2

Watershed Investigations (6th)

Watershed scientists investigate the health of Blandy's aquatic systems. They collect, measure, record, and analyze abiotic water quality indicators such as temperature, turbidity, pH, and nitrates. They assess water quality by identifying and analyzing aquatic macroinvertebrates of Blandy's wetlands. They also evaluate the physical site adding context and a sense of stewardship in this field investigation which can be a component of a meaningful watershed educational experience field investigation.

SOL: Science 6.1, 6.6, 6.8, 6.9
English 6.C.1 **Math** 6.CE.2, 6.PS.1

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."

Middle & High School

Young Ecologists (7th)

Ecologists investigate our replica skull collection to explore classification using physical traits. Using science and engineering practices, they assess the biotic and abiotic factors vital to a watershed ecosystem, determining an organism's role, and what organisms can be supported in a system. With this program, your young ecologists will have a meaningful understanding of habitat, diversity, and biological interdependence.

Science SOL: LS.1, LS.3, LS.5, LS.6, LS.7, LS.8, LS.9, LS.11
English SOL: 7.RV

Arborsleuth (6th—8th)

Students hone their observation skills as they journal and explore the Arboretum using hand lenses and dichotomous keys to identify trees. Through modeling and observation, students learn about the economic and ecological significance of the American chestnut, past, present and future.
Science SOL: LS.1, LS.3, LS.4, LS.6, LS.7, LS.8, LS.9, LS.11

Water Quality Technology (9th-12th)

Environmental scientists use hand-held colorimeters to explore the effects that temperature, pH, dissolved oxygen, nitrate, and other indicators have on water quality and our watersheds. Students investigate macroinvertebrate health with hands-on data collection. Students evaluate results and communicate their water quality assessment with others. Assessments can be shared with your local community to exercise civic responsibility. This program is designed to take three hours with groups of no more than 15. This field experience can be a component of a MWEE.
Science SOL: ES.1, ES.8; BIO.1, BIO.2; CH.1
English SOL: 9.DSR, 9.C.1, 10.DSR.1, 10.C.1
Math SOL: PS.DS.1, AFDA.DA.2

Science Explorations (9th-12th)

Student researchers use critical thinking to conduct scientific investigations as they define a problem, develop a hypothesis, interpret data, and communicate their results. Topics vary based on season, learning goals. Previous exploration examples 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. 290 to discuss class sizes, scheduling, and possible investigations.
This program is scheduled from 9 a.m. to 2 p.m.

Science SOL: BIO.1, CH.1, ENV.1, and others depending on the inquiry chosen
Math SOL: PS.DC.1, PS.DC.2, PS.DC.3, PS.DS.1, PS.DS.2

High School

Environmental Science Field Investigations (9th-12th)

Complementing the VDOE's Environmental Science Content & Process Guidelines, your environmental scientists develop research questions, devise collection/observation techniques to employ, collect and analyze data, and evaluate their methods. Students carry out field investigations using scientific methodologies and concepts that help them more deeply understand the interrelationships of the natural world and human/ environmental systems.

Science SOL: ENV.1, ENV. 5, ENV.6, ENV.9, EC.1, EC.7, EC.8, EC.13

Self–Guided Backpack Programs

Interested in a self-guided exploration of the Arboretum?

Reserve a backpack full of engaging, self-directed activities! Each identical backpack in a set is intended for chaperoned groups of 6 students, meaning one backpack set can accommodate up to 24 students total. Fee for each Backpack Set: $15

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, practicing reading and listening skills with the *Butterfly Alphabet* book; and more!

Secrets of the Garden

Grades K-3

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

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 connect 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.

Program	*Science Topic*	*Science SOL (2018)*	*Grade*	*Next Generation Science Standards*
Early Explorers	**Observations & Investigation**	VA ELDS: SED3.1, CD3.5, CD1.1, CD1.2; K.1, K.3, K.5, K.6, K.7, K.9	preK– K	
Mammals	**Animal Life**	K.1, K.3, K.5, K.7; 1.1, 1.5, 1.7; 2.1, 2.4, 2.5, 2.7	K– 2	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	K-2	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	2-4	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	2-3	LS1.A, LS1.B, LS1.D, LS4.D
Vivid Virginia	**Food Webs & Ecosystems**	3.1, 3.4, 3.5, 3.8; 4.1, 4.2, 4.3, 4.8	3-4	LS2.A, LS2.C, LS4.C, LS4.D; ESS3.C
Scoop on Soils	**Soil Science**	3.1, 3.6, 3.8	3	ESS2.A, ESS2.E
Snake Savvy	**Animal Behavior**	3.1, 3.4, 3.5; 4.1, 4.2, 4.3, 4.8	3-4	LS1.A, LS1.D, LS4.C, LS4.D
Flower Functions	**Flower Structure & Function**	4.1, 4.2, 4.3, 4.8	4	LS1.A, LS1.B, LS1.C, LS4.D
Rocks Talk	**Rocks, Geology**	5.1, 5.8	5	ESS1.C, ESS2.A
Watershed Investigations	**Watershed Science**	6.1, 6.6, 6.8, 6.9	6	LS2.A, LS2.C, LS4.C, LS4.D; ESS2.C, SS3.A, ESS3.C
Arbor Sleuth	**Classification & Identification**	5.1, 6.1, 7.1	5-7	LS1.A, LS4.D, LS3.A, LS3.B
Young Ecologists	**Interdependence of Life**	LS.1, LS.3, LS.5, LS.6, LS.7, LS.8, LS.9, LS.11	7	LS2.A, LS2.B, LS2.C, LS4.B, LS4.D
Water Quality Technology	**Watershed Science**	ES.1, ES.8; BIO.1, BIO.2; CH.1	9-12	LS2.C, LS4.D; ESS2.C, ESS3.A, ESS3.C
Science Explorations	**Scientific Process**	BIO.1, CH.1, ENV.1 and others depending on chosen inquiry	9-12	Science & Engineering Practices 1-8
Environmental Science Investigations	**Scientific Process**	ENV.1, ENV. 5, ENV.6, ENV.9, EC.1, EC.7, EC.8, EC.13	9-12	Science & Engineering Practices 1-8
Self-Guided Backpacks	**Exploration of the Natural World**	Varies	PK-8	