

New this year: we are working with some of our educational partners to offer special classroom programming during school days, specifically tied to your SOLs!

There will be limited offerings each school day with a different educational partner. Teachers are invited to sign their classes up on a first-come, first-served basis for these FREE 20-30 minute interactive and instructional presentations during the hours of 10-2.

Check out the schedule below and follow instructions on the Ed Expo website to register. Space is limited!

Friday, September 23rd: Department of Wildlife Resources

- Turtle Troubles, Recommended Grades 4 and up
- 45 minutes, one class or 24 students
- Class times: 10:00, 10:50, 11:45, 12:35, 1:25

In this hands on activity students will explore the threats facing turtles and ways that scientists, communities and individuals can help protect different turtle species. Although we will be using turtles as an example we will also talk about how many of the threats to turtles and solutions for protection can be extended to many other species in Virginia.

Monday, September 26th: Soil and Water Conservation Districts

- Exploring Soil & Water in Virginia, Recommended Grades K-5
 - SOL 3.7 a,b,c,d; 3.9 a,d,e; 4.9 a,d
- 15 minutes, one class or 20 students
- Class times: 10:00, 10:30, 11:00, 11:30, 12:00, 12:30, 1:00, 1:30

Students will learn the important role that soil and water play in Virginia and the world around them. Key topics such as watersheds and natural resources will be covered. Students will discover their local watershed and explore ways that they can keep their watershed clean and healthy for all life that relies on it.

Tuesday, September 27th: Department of Historic Resources (Option 1)

- Discover Archaeology, Recommended Ages 5-11
 - HSS 1.1a, 1.1c, 1.1g, 1.3a, 1.3d, Geography 1.5a, 1.5c, HSS 2.1a, 2.1c, 2.1g, 2.3a, 2.7a, HSS 3.1a, 3.1g, 3.13, VS2a, VS2b, VS2c, VS2d, VS2e, VS2f, VS2g
- 20 minutes, one class or 20 students
- Class times: 10:00, 11:00

We'll learn what archaeology is and what it tells us about people who lived in Virginia in the past. Archaeologist Laura Galke will discuss myths and misconceptions about archaeology. Students will be provided handouts showing artifacts with which they can interact. The artifacts are indigenous and historical.

Tuesday, September 27th: Department of Historic Resources (Option 2)

- Foodways in the Past, Recommended Grades 4-5
 - Science 4.4a, 4.5f, English 4.1b and e; 4.2a-c, English 5.1a-c; 5.2a; 5.6a,c, g
- 15-20 minutes, 10 students
- Class times: 12:00, 12:30, 1:00, 1:30

This presentation introduces students to foodways in the past and the methods that archaeologists use to learn about them. Information is presented in an historical overview and in a series of playing cards. Students use these materials to learn about the types of foods that people ate in the past. They also learn about foods and food-related artifacts that people acquired through hunting, fishing, gathering, gardening, poultry raising, and purchase. In addition to the content provided, the cards promote reading skills through pictures and text and ask students to classify information and assess values.

Thursday, September 29th: Department of Forestry

- We all need Trees, Recommended Grades 4,6
 - Science (2018) 4.8, 6.9
- 20 minutes, one class or 20 students
- Class times: 10:00, 10:30, 11:00, 11:30, 12:30, 1:00, 1:30

Interactive session focusing on Virginia forest products. Trees are an amazing renewable resource, providing us with wood, paper, and so much more. Come explore all the places you'll find tree products hidden in materials we use every day.

Friday, September 30th: Virginia Marine Resources Commission (Option 1)

- Live Horseshoe Crab Presentation, Recommended Grades K-6
- 15 minutes for horseshoe crabs, one class
- Class times: 10:45, 11:45, 12:45, 1:45

Have you ever wanted to meet a REAL prehistoric creature? Horseshoe crabs (*Limulus polyphemus*) are considered a living fossil because they have existed nearly unchanged for about 450 million years. Come join us to meet these interesting creatures and learn about their exoskeletons, multiple sets of eyes, and their surprisingly-colored blood. This presentation, geared for children and adults of all ages, will include fun facts about horseshoe crabs and allow an interactive hands-on experience with one of Virginia's most interesting creatures!

Friday, September 30th: Virginia Marine Resources Commission (Option 2)

- Fish Age and Growth Lab, Recommended Grades 6-12
 - 30 minutes for fish ageing, 20-30 students
 - Class times: 10:00, 11:00, 12:00, 1:05
- Conducted by the MRC Age and Growth Lab and Biological Sampling Program staff, this presentation will cover the process by which age and other biological samples are taken from both commercially and recreationally harvested fishes. This presentation will last approximately 30 minutes and be divided into two distinct halves. The first portion will feature actual commercially harvested fish collected by staff prior to the presentation. Staff will demonstrate the step-by-step process by which the otoliths (ear bones) are removed from the brain cavity of the fish and how we determine the sex and maturity stage of each sample. This process will involve real organs and while it is generally a controlled and clean operation, the nature of this kind of work is that it can be unpredictable at times. Age and Growth staff will conduct the second half of the presentation and will describe how the otoliths are processed in order to determine the age of fish as well as how this information is used to better understand at-large populations of fish species. Finally, there will be a number of microscopes set up that will be displaying the finished product of a sectioned otolith. Students will have the opportunity to observe for themselves the rings described in the presentation and see if they can match the count determined by Agency staff.

HIGH SCHOOL SPECIFIC CLASS OPTIONS

Wednesday, September 28th: Department of Historic Resources

- Finding Shipwrecks with A Magnetometer and Sonar - How Acoustics and Magnetics Work Underwater, Recommended Grades 9-12
 - ES-2 Complex Earth Systems, ES-6 Non-renewable resources, ES-10 Complex ocean systems, PH-10 Magnetic forces
- 20 minutes, one class or 20 students
- Class times: 10:00, 10:30, 11:00, 11:30, 12:00, 12:30, 1:00, 1:30

More than 70% of the earth is covered by water and much of it is unexplored. We might call this "inner-space". For thousands of years ships have wrecked in this aquatic world and are out of sight, but not out of mind. We can use understandings of acoustics and magnetic fields to locate these wrecks, even in thousands of feet of water or when completely buried by sediments. This presentation covers the basics of how we use physics to investigate our world and find amazing historic shipwrecks. Join State Underwater Archaeologist Brendan Burke, VDHR, to learn how to 'see' beneath the waves and discover the submerged history of the Commonwealth.

NEW

NEW THIS YEAR: LIMITED CLASSROOM OPTIONS

Wednesday, September 28-Friday, September 30th: Virginia Tech Natural Resources

- STEM Majors in Sustainability, Environment, & Conservation, Grades 9-12
- 60 minutes, open to all, individuals welcome
- Class times: 2:10, 3:10
 - If you have a group that would like to participate in this session earlier in the day, please contact Sarah Jane at edu@statefairva.org. We would love to work with you!

All aspects of our civilization, from our tech gadgets to our homes; from our clothes to the water we drink—everything comes from nature. Thus, environmental careers play a critical role in our global economy, and yet these fields struggle to attract enough students. Often, this is a result of misconceptions about what these fields entail and what career opportunities exist. This session will introduce students and teachers to 11 unique environmental, conservation, and sustainability majors at Virginia Tech, and will make connections between these and more well-known STEM fields (such as biology, chemistry, engineering, env. science, physics, technology, etc.). The goal is to encourage more students to discover unique/hidden college majors and pursue important careers in high demand disciplines.

Sign up your class today!



<https://www.signupgenius.com/go/10C0E4AADAC29A7FDCE9-edexpo>

