

Tri-County/City Soil & Water Conservation District Programs by Request

Educating the public is an integral part of reaching Virginia's goals of preventing soil erosion and protecting water quality. Tri-County/City works alongside local partnering agencies to provide meaningful educational opportunities to students of all ages that will inspire future stewards of Virginia lands and waters. Our programs are catered to the audience and we believe that an understanding and increased awareness of natural resources leads to lifelong behavioral change.

Please contact **Mariya Hudick** at mariya.hudick@tccswcd.org to schedule programs.

Soil Conservation

"4-By-4 Vision" (60 minutes) How many of your favorite toys can you fit in a 4'-by-4' cube? Could you fit all your essentials in that same amount of space? If that little amount of space were suddenly taken away, would the rest of the ecosystem be affected? Students explore just how much of nature can exist in a small space by identifying the diversity of organisms in a pot of soil. The program seeks to show and explain the vast amount of diversity in one cubic foot of soil. Students are provided instructions to recreate this model at home. Based on the Smithsonian "Biocube" project.



"Soil, Soil, Everywhere!" (60 minutes) Students discover the basics of soils as they explore the three major types – sand, silt, and clay. Working with spoons, our hands, and water, we learn how to identify different soil types through texture and color. Soil samples from King George, Spotsylvania, and Stafford counties are provided via Tri-County/City SWCD's partnership with USDA's Natural Resource Conservation Services (NRCS).

"Soil Supreme" (30 - 60 minutes) 'Soil' is to 'layers' as 'lettuce' is to...? Can you imagine eating a Soil Supreme Sandwich? Much like that favorite food, soil layers stack one on top of one another to create the perfect recipe: a soil profile. To better visualize soil profiles, students explore three models – illustrations, a sealed jar of layered earth material, and a Lego construction activity. Students are provided instructions to recreate their own soil jar and Lego model at home as well as a coloring activity to stack their Soil Supreme Sandwich. Adapted from "Little Bins for Little Hands" and the Project WET curriculum.

Water Conservation

“It’s All Downstream” (60 minutes) Utilizing the interactive Enviroscape model, students learn watershed concepts, including human impacts on watershed ecosystems and ways to mitigate major sources of pollution. Chesapeake Bay environmental quality data is used to show how our life near the Rappahannock, Potomac, and York Rivers impacts the Bay.

“The Incredible Journey” (60 minutes) Water is all around us, and it sure does not like to stick around in one place for too long! With a roll of a die, students re-enact the movement of water within a water cycle as map out their journey by traveling to stations representing various terrains collecting different beads. Creating their unique beaded bracelet, students make a visual representation showing that the water cycle journey is not a continuous straight line but rather a web of possibilities. Indoor or outdoor program. With more room outdoors, students can move more between each water cycle terrain station. From the Project Wet curriculum.

“Stormwater!” (60 minutes) Where does stormwater come from? Where does it go? Students will look at two surfaces, permeable and impermeable, to make predictions on how the water will interact in the two experiments. The surfaces represent soil and asphalt using sponges and plastic bags. Students will then draw similarities between the experiment with physical structures that they find in the real world by exploring their school campus. Outdoor program. From the Project WET curriculum.

“Filter it Out!” (30 - 60 minutes) How does nature clean its waters? Students work in pairs to use coffee filters, sponges, and pebbles to construct their own filtration system to test how well they can clean water. They then explore the basics of groundwater, including how the underlying rocks beneath our feet form layers to filter freshwater from contaminants. Indoor or outdoor program. Outdoors students may use natural material (twigs, leaves, rocks) to create their filters. Adapted from presentation at the 2019 Virginia Association for Environmental Education conference.

People & the Environment

“Sketching Nature” (30 - 60 minutes) Did you know that some of the best scientists are also fantastic artists? We don’t always think to put the two together but both art and science rely on one another. Students learn about nature journals and how art plays a significant role scientific investigation. Students observe, explore, and discover nature by sketching what they see, not what they know (e.g. drawing a leaf as we see it, noticing the little details, and not as we imagine a leaf to appear). Indoor or outdoor program. This program can easily be extended outdoors where students become scientists as they further explore nature through art. Adapted from the Lake Anna State Park “Sketchin’ Nature” program developed at the 2015 State Parks Spring Interpretive Training.

“The Pollution Solution” (60 minutes) How do water pollutants travel? Students line up to create a meandering river system, each given a small plastic cup with water. At the beginning of the line, students at the river’s headwaters will pass water downstream to the next student. As students pass the water the instructor adds drops of food dye representing pollutants until the water reaches the Chesapeake Bay, represented by a bucket. Students then discuss how we affect the watershed and actions we can take to protect the Bay. Adapted from the Project WET curriculum. Can be paired with a shortened version of the “It’s All Downstream” program described above.

“Your Water Footprint” (60 minutes) We’ve heard of our Carbon Footprint but what about our Water Footprint? Have you ever wondered how much water a person uses in one day? Students learn about water conservation and begin to understand it is a limited resource. Drawing from their own daily experiences, students track their water use to create a visual diagram. From the Project WET curriculum.