

# CONSERVATION education

Loudoun Soil and Water Conservation District

September 2023

Welcome to the Conservation Education Newsletter from the Loudoun Soil and Water Conservation District. This quarterly publication will keep you up to date on conservation education news from our District.

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## Greetings...



My name is Kaylea Powell, and I am the new Conservation Specialist at LSWCD. As part of my role, I will be assisting with the Education efforts of LSWCD. I am a recent George Mason graduate and earned my Bachelor's in Environmental Science & Policy with a concentration in Ecology. In my free time you can find me

looking after my reptiles and amphibians, playing with my dog, or hunting for mushrooms deep in the woods.

Prior to joining the team, I worked at a Science in the Park program where I taught K-6th grade students about various topics in Environmental Science in an outdoor classroom setting.

I am extremely passionate about sharing my love and knowledge of the natural world with others. I am looking forward to the many opportunities I will have with LSWCD to continue to nurture my passion.

## Meet our Summer Interns!

Rachel Parmele (Virginia Tech) and Maria McDonald (University of Florida) helped our organization in many ways this summer. They assisted with agricultural best management practices, soil testing, vegetation surveys, farm visits, tree planting inspections, educational outreach in the classroom, events such as the Banshee Reeks Pollinator Festival and much more with a wonderfully positive attitude! Thank you, Rachel and Maria, for your hard work and support!





**Local Artists of all ages support water conservation!**

**Check out the AMAZING winners of our 2023 Soil & Water Conservation Poster contest...**



**Cara Shin**  
K-1 Grade Category  
Artlicious Kids



**Diya Singh**  
2-3 Grade Category  
Rosa Lee Carter ES



**Jayden Yim**  
4-6 Grade Category  
Artlicious Kids



**Saanvisha Maddukuri**  
7-9 Grade Digital Category  
Brambleton MS





## TEACHER Mini Grant program now accepting applications!

The Loudoun Soil & Water Conservation District offers mini-grants of up to \$500 to Loudoun County teachers. The Mini-Grants are intended for projects that integrate soil and water conservation into any curriculum.

### **Criteria for Mini-Grant:**

- Addresses soil and water conservation and environmental education objectives.
- Increases awareness about natural resources.
- Presents a specific, feasible plan of action to accomplish well defined, short term and long term results.
- Develops new or expands use of existing educational resources.
- Offers the potential to serve as a model for use in other schools or classrooms.

### **Funding Guidelines/Timeline:**

The Loudoun Soil & Water Conservation District Board of Directors will review mini-grant proposals and award funding to successful candidates. Notification of grant awards will be made as soon as possible. Grant recipients must complete the proposed project within the timeline stated in their grant proposal. Recipients must submit a mid-year report and a final report outlining their project achievements.

Visit [www.loudounsoilandwater.com/education/teacher-mini-grants](http://www.loudounsoilandwater.com/education/teacher-mini-grants)

to download an application!



# Youth Conservation Camp



For over 40 years, the Virginia Association of Soil and Water Conservation Districts has sponsored a week long summer conservation camp for Virginia high school students (currently enrolled in grades 9th-12th) on the campus of Virginia Tech. This year, the program brought together over 54 interested students for a week of learning about Virginia's natural resources from conservation professionals and faculty from Virginia Tech. We are proud of our two LoCo students who took part of this amazing opportunity this year: Dagny Kannengieszer (Woodgrove HS) and Liam McCormick (Tuscarora HS)!





# Youth Conservation Leadership Institute

We had many amazing Loudoun students participate in our **Youth Conservation Leadership Institute** program this past school year! We are so proud of their service and dedication to their conservation projects.

- \* **Atmika Gorti**, Freedom HS/Acadmies of Loudoun, *Testing Chloride Levels in Local Streams* (Amy Ulland, mentor)
- \* **Liam McCormick**, Tuscarora HS, *Invasive Bradford Pear Tree Removal at Tuscarora HS* (Jay Frankenfield, mentor)
- \* **Leah Johnson**, Loudoun Valley HS, *Sustainability at Loudoun Valley HS*
- \* **Advitiya Srinivasan**, Briar Woods HS, *Fluvial Geomorphology and Flooding: The Effects and Relationships between Flood Prone and Bankfull Depth & Width, Slope, Velocity, Area, Discharge, and Stream Bed Characteristics on the Ability of Loudoun County Streams to Flood*
- \* **Anirudh Anandarao**, John Champe HS, *Macroinvertebrate Survey*

**YCLI is NOW accepting applications for the 2023-24 school year. Please go to [www.loudounsoilandwater.com/youth-conservation-leadership-institute](http://www.loudounsoilandwater.com/youth-conservation-leadership-institute) to learn more and download an application.**



Leah Johnson, YCLI participant, showcasing her project at the Student Environmental Action Showcase this past spring. She won first place for her efforts at SEAS! Congratulations Leah!



# Loudoun SWCD Conservation Lessons

The following are Presentations or Conservation Checkouts that can be scheduled through our Education Specialist. Grades suggested are based on Virginia Science Standards of Learning correlations. We can present the lessons to other grades or groups. There is no charge for LSWCD Lessons.

## Presentations

Lessons listed as Presentations are facilitated by a Loudoun SWCD employee. All of the lessons are interactive and participatory with the students.

## Conservation Checkouts

Conservation Checkouts have all materials needed (unless noted) for another instructor to present. Lesson plans, instructions or guides are included in the Checkout. Lesson plans are available via email upon request.

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### **Freddy the Fish** Grades K, 1—Presentation or Checkout, 1 Class, Students at desks; 30 min (+15 prep)

This is a fun and highly participatory activity to discuss how humans affect life processes and water quality.

Each student is able to participate with their own 'stream' and 'fish.'



SOL SCI.K.1, K.6, K.7 Prediction, Water, Living, Animal Needs, Water Quality

SOL SCI.1.1, 1.8 Observation, Prediction, Water Quality, Natural Resource, Pollution

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### **The 3 R's – Reduce, Reuse, Recycle** Grades K, 1, 2—Presentation or Checkout, 1

**Class, 25 min (+5 prep)** The 3 R's is a fun program to teach about Reducing, Reusing and Recycling. The lesson is integrated into Recycling Relay, an interactive game that involves each student in the deciding how items should be disposed.



SOL SCI.K.11 Recycling, Reuse, Natural Resources, Conservation

SOL SCI.1.8 Recycling, Reuse, Natural Resources, Conservation

SOL SCI.2.8 Recycling, Reuse, Natural Resources, Conservation, Plant Products

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### **The World Beneath Your Feet** Grades K, 1, 2—Checkout, 1 Class, Grassy area outside, 20 min (+ 10 prep)



Students begin thinking like scientists as they make observations about what is in a patch of their schoolyard. This Checkout includes a Lesson Plan, Observation Sheets, Clipboards, Investigation

Tools (rope, magnifier, bug box, tweezers, trowel, ruler, misters) for teams of 2-3, and thermometer.

SOL SCI.K.1, K.2, K.6, K.8 Observation, Senses, Living, Nonliving, Plants, Light, Shade, Soil

SOL SCI.1.1, 1.4, 1.6 Observation, Senses, Simple Tools, Plants, Habitat, Sun

SOL SCI.2.1, 2.5, 2.8 Observation, Prediction, Data, Living, Nonliving, Habitat, Plants



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### **Dirt Buddies** Grades K, 1, 2, 3—Checkout, 1 Class, Tabletop, 20 min (+10 prep)

Grow your own grassy-haired dirt buddy! This is a fun classroom activity that explores observing change over time as grass grows on the dirt buddy heads. All supplies and instructions are included for this Conservation Checkout. No lesson but a good accompanying activity.

SOL SCI.K.1, K.7, K.9, K.10 Observation, Plants, Life Cycle, Plant Growth; Change

SOL SCI.1.1, 1.4, 1.6 Observation, Plants, Plant Growth; Sunlight

SOL SCI.2.1, 2.4 Observation, Life Processes, Life Cycle

SOL SCI.3.1, 3.7, 3.8 Observation, Soil, Life Cycle

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# Loudoun SWCD Conservation Lessons

## **Worms on the Go** Grade K, 1, 2, 3, 4, 5—Presentation, 1 Class, Students at desks; 35 min (+15 prep)



999 of my best friends and I come teach your class about worms, soil and composting. The first half is a lesson on the worms: anatomy, their role in the food web and their importance to our soil. Then students get up close and personal with red wiggler worms. Depending on the time, each student can meet a worm to explore or come visit at a station with me.

SOL SCI.K.1, K.2, K.6, K.7, K.10, K.11 Living Organism, Habitat, Life Cycle, Natural Change, Conservation, Natural Resource

SOL SCI.1.1, 1.5, 1.8 Habitat, Physical Characteristics, Natural Resource

SOL SCI.2.1, 2.4, 2.5, 2.8 Life Processes, Life Cycles, Living Systems, Habitat, Natural Resource, Plants as Food

SOL SCI.3.1, 3.4, 3.5, 3.6, 3.7, 3.8, 3.10 Behavioral Adaptations, Decomposer, Food Chain, Natural Resources, Conservation, Soil, Life Cycles, Interdependency, Renewal

SOL SCI.4.1, 4.5, 4.9 Living Systems, Food Webs, Natural Resources

SOL SCI.5.1, 5.5 Living Systems



## **Soil Tunnel** Grade 3—Checkout, Entire grade over a week, Open area inside, Varies (+60 prep)

Discover what is above and below ground with our interactive soil tunnel. Loudoun SWCD staff will set up the soil tunnel for your school to use for one week. This pairs well with Soil Studies and Dirt Buddies.

SOL SCI.3.1, 3.7 Soil, Natural Resource, Plants, Nutrients



## **Soil Studies** Grade 3—Presentation or Checkout, 1 Class, Tabletop, 25 minutes (+5 prep)

Explore what comes from soil, what is soil and describing soil with your students. Each student creates their own soil tube to keep. This is a great lesson to pair with the Soil Tunnel. This can be a Presentation or a Conservation Checkout. For the Checkout, the lesson plan, visual aids and supplies are provided.

SOL SCI.3.1, 3.5, 3.7 Soil, Components of Soil, Natural Resource



## **The Incredible Journey Water Cycle** Grades 2, 3—Presentation or Checkout, 1 Class, Tabletop, 20 min (+10 prep)

Students will take a journey as a raindrop and move through the water cycle. As they move, they will collect beads to create a bracelet representing their movements throughout the water cycle. Adapted from Project Wet's The Incredible Journey.

Project Wet's The Incredible Journey.

SOL SCI.2.1, 2.3 Observation, Water Cycle, Changes in Matter, Liquid, Gas, Evaporation, Condensation, Pollution

SOL SCI.3.1, 3.9, 3.10 Observation, Water Cycle, Conservation, Human Influence, Pollution

## **Enviroscape Watershed Model** Grades 3, 4, 5, 6 —Presentation\*, 1 Class, Tabletop, 45 min (+15 prep)



The Enviroscape Watershed is an interactive table-top model used to demonstrate watersheds and the human impact on water quality. Students participate in contaminating the watershed through non-toxic 'pollutants' and create a rainstorm to illustrate the movement of water and pollutants through the watershed. Training is available for schools with their own Enviroscape Model. **\*Checkout available for**

**grades 6 & up**

SOL SCI.3.1, 3.9, 3.10 Models, Natural Resource, Watershed, Water Cycle, Water Quality, Human Impact

SOL SCI.4.1, 4.5, 4.9 Models, Human Impact, Watershed, Water Resource, Pollution

SOL SCI.5.1, 5.7 Models, Human Impact, Weather, Erosion

SOL SCI.6.1, 6.5, 6.7, 6.9 Models, Human Impact, Watershed, Water Resource, Pollution, Best Management Practices

## **Jeopardy - Conservation, Waste Management or Water** Grades 4, 5, 6—Presentation, Checkout or PowerPoint File, 1 Class, Open area in front of classroom, place to hang question board, 45 min (+15 prep)



**\*\*Now available as a PowerPoint as well\*\*** Bring the popular game show into your classroom with an educational twist. This exciting, fast-paced game has three options, general Conservation, Waste Management (trash & recycling) or Water. *Contact Education Specialist for SOLs.*