

School Year 2016-2017

Durham Soil & Water Conservation District Educational Programs for Teachers & Educators

This newsletter can assist educators in finding **FREE** educational opportunities & resources in teaching and learning about nature, the environment, STEM and more in Durham



Scenes
from
Environmental
Field
Days

Newsletter Contents

- Conservation Contests
- Envirothon team competition
- Resource Conservation Workshop
- Classroom Presentations
- Bookmark Contest
- Environment Education Learning Library
- 3rd Grade Environmental Field Days
- Teacher/Educator Workshops
- Teacher of the Year Awards



Durham County Soil and Water Conservation District

Contact us at:

Durham SWCD
721 Foster St
Durham, NC 27701
Phone: 919-560-0558
Fax: 919-328-6192

We are on the web at:

<http://dconc.gov/swcd>

Our Education Staff:

Lead District Education Coordinator:

Jennifer Brooks - Natural Resources Coordinator,
NC Certified Environmental Educator

jbrooks@dconc.gov

preK-Lower Elementary Education:

Lisa Marochak - Senior Administrative Officer
NC Certified Environmental Educator

lmrochak@dconc.gov

Agricultural Education: (school gardens, etc...)

Like us on facebook at



[Durham County Soil and Water Conservation District](#)

Follow us on Twitter at [DCoSWCD](#)



Check out our YouTube channel at [Durham SWCD](#)



Our Board of Supervisors:

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- Danielle Adams, Vice Chair
- Katie Locklier, Secretary/Treasurer
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- Mark Dewitt, Associate Supervisor
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- Melissa Rooney, Associate Supervisor

District Staff:

- Eddie Culberson, Director
- Lisa Marochak, Senior Administrative Officer
- Jennifer Brooks, Natural Resources Coordinator/Education Coordinator
- Mike Dupree, Agribusiness & Environmental Services Manager
- Heather Dutra, Watershed Conservationist
- Matt Kinane, District Conservationist, NRCS

Calendar of Events at a Glance....

July 2016 - June 2017

All year Classroom Presentations by appointment (p 5)
Teachers Workshops available (p10)

July 2016

18th 1st Day of School (year-round)

August 2016

29th 1st Day of School (traditional)
Conservation Contests for 3rd - 9th grade Open

October 2016

11th-13th 3rd Grade Field Days (p 8)

December 2016

15th Conservation Contest entries due for All (p 6)

January 2017

Date TBA District Public Speaking Contest event (p 6)

February 2017

23rd Area 4 Envirothon team registration due

March 2017

1st Spring Bookmark Contest opens (p 7)

24th Area 4 Envirothon competition (p 9)

April 2017

27th District K-2nd grade Bookmark Contest entries due (p 7)

TBD NC Envirothon statewide competition (p 9)

May 2017

TBA SWCD Annual Educational Awards Banquet

June 2017

9th Last day of school for all

19-24th Resource Conservation Workshop for High School students

What we do...



The Durham Soil and Water Conservation District's mission is to *conserve, enhance and promote the natural resources of Durham County by providing technical assistance, **environmental education** information and economic incentives to County citizens and by exhibiting a diversified program to meet its changing needs.*

Because the District works hard to protect Durham County's natural resources, we know that without educating the public about their environment, our other programs and projects would be for naught. That's why the District is dedicated to encouraging and sponsoring a strong and active Environmental Education Program for all age groups.

Our goal is to support educators and teachers in teaching conservation education. We offer, **FREE of Charge**, a number of different education programs for various age levels throughout the school year.

Please feel free to contact us for more information about any of the programs you see detailed here or for information on how your class can participate.

Classroom Resources

Environmental Education Learning Library

The Durham SWCD Environmental Education Learning Library provides the best environmental education materials to teachers and other educators who work with children and aspire to share the joy of nature and the environment with them. The library contains fiction and non-fiction books, videos & magazines about the environment and natural resources targeting ages 2-9.



All Learning Library materials are available FREE-of charge for a 2 week loan period to qualified participants. Application, Request Sheet and a book list can be downloaded from our website at <http://bit.ly/DCoLearningLibrary>



Classroom Presentations Pre K - 12th grade activities

We offer classroom presentations and hands-on activities for a variety of natural resource topics for classes across Durham County throughout the school year.

Popular presentations include; soils/erosion, watershed models, wildlife, water quality, vermicomposting, recycling, watersheds, pollinators and more... *(basically any naturally resource topic you can think of)* We also offer presentations on agricultural education topics such as gardening, greenhouse production, animal agriculture, best management practices and more.

Please contact us at 919-560-0558 to learn more.



Enviroscape



To arrange for a presentation or discuss options, please call 560-0558 or email:

- 🔹 preK - 3rd grade: Lisa at lmrochak@dconc.gov
- 🔹 3rd - 12th grade: Jennifer at jbrooks@dconc.gov



BETC (Bionomic Education Training Center)

BETC is a workforce development training program with curriculum that addresses water quality and conservation Best Management Practices. Two units of curriculum were developed for the BETC program: a 30 day unit on engineering rain gardens and cisterns for water quality improvements and an 11 day unit on soils and water analysis. Though written for high school, the curriculum can be easily adapted to use in middle schools. BETC students also have access to Data Hubs, soil moisture meters and rain gauges. Each week students record the amount of water collected in the rain gauges, record the soil moisture with the sensors and collect other environmental data such as humidity, wind speed and solar radiation using the Data Hubs. This gives students the experience of collecting and analyzing data they can relate to and then use to evaluate other systems that have been installed at the school, such as the irrigation technology upgrades on the athletic fields. The curriculum provide students an opportunity to obtain hands-on work experience in STEM, and encourages them to pursue careers in Green Infrastructure Technology and develop entrepreneurial skills.

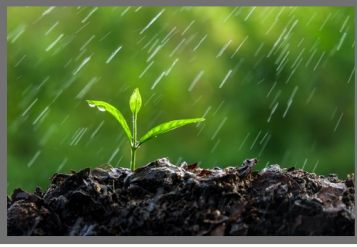


If you are interested in bringing BETC to your school, please contact mdupree@dconc.gov or call 919-560-0558



Contests

3RD - 9TH GRADE CONTEST: **SOIL & WATER...YOURS FOR LIFE**



We don't typically give the soil under our feet much thought, but it plays a big role in our lives. Bigger than most realize. It is more than just 'dirt'... it is life. One tablespoon of soil has more organisms in it that there are people on earth. In fact it is the 2nd largest ecosystem on Earth. Similarly, water plays a critical role in our very survival. Our planet is about 71% water and our bodies 60%. More than 90 % of the planet's living biomass are found in the oceans. We need both Soil AND Water to grow the food to feed the 7 Billion plus world's population.

Although it takes centuries to millions of years to form, soil can be harmed or lost in a matter of minutes by careless human actions. And though water is continuously being recycled, the quality of it can be greatly impacted by everyday human actions. And yet 11% of the world's population do not have access to clean drinking water. Soil and Water are two of the four most fundamental and basic natural resources—soil, water, air and sunlight—that sustain life on Earth. We are looking for creative interpretations of just what it means when we say "Soil & Water...Yours for Life". We are eager for students to Dig Deeper!

- Open to all public schools, private school, homeschool students and student clubs in Durham County.
- ✂ Poster Contest: 3rd-6th grade
 - ✂ Essay Contest: 6th grade
 - ✂ Computer Designed Slide Show: 6th grade
 - ✂ Public Speaking: 7th & 8th grade
 - ✂ Computer Designed Poster: 9th grade



Contest entries
due on :
Thursday, Dec 15th

This contest theme, 'Soil & Water...Yours for Life' can be incorporated &/or enhance NC DPI Standard Course of Study, Essential Standards for Science for each grade level in the following Units:

- 3rd grade - Earth Systems, Structures & Processes and Ecosystems
- 4th grade - Earth History and Ecosystems
- 5th grade - Ecosystems
- 6th grade - Earth Systems, Structures & Processes and Ecosystems

- 7th grade - Earth Systems, Structures & Processes
- 8th grade - Earth Systems, Structures & Processes and Ecosystems
- 9th grade - Earth Systems, Structures & Processes and Ecosystems

Important Notice Teachers!!!
If one of your students wins 1st Place in one of the Conservation Contests...you will also receive an award of \$30!

Theme: NC Wildlife

DEADLINE: Thursday, April 27, 2017



DURHAM SWCD BOOKMARK CONTEST



Durham County kids in K - 2nd grade are invited to participate in the annual Spring Bookmark Contest sponsored by the Durham Soil & Water Conservation District. This year's theme is:

NC Wildlife

Winners from each grade level will have copies of their bookmark given to their whole class! The contest is open to any public, private or homeschool K-2nd grader in Durham County from March 1 - April 27, 2017. Contact Lisa Marochak at 919-560-0558 for full rules and the official entry form.

Durham Soil & Water
Conservation District
721 Foster St
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Programs and Events

3rd grade Environmental Education Field Days

October 11,12 & 13, 2016

Each year the Durham SWCD pulls together a number of different resource professionals, who's job it is to protect and improve the environment, and invite all Durham County 3rd graders to come spend a day learning about their world. The 3rd Grade Environmental Education Field Days is a chance for Durham's students and teachers to put down the book, get out of the classroom and learn first hand about our natural world from the scientists and conservationists while having fun!



Topics include:

Soils - Water/Aquatic Environments - Forestry/Plants - Wildlife - Environmental Issues

Open to all Durham County Public or Private 3rd grade classes! The event is **Free** of charge, However participation size for each day is limited. Availability is on a first come first serve bases. Call 919-560-0558 or email jbrooks@deconc.gov today to sign up!





NC Envirothon program

The NC Envirothon program is a hands-on environmental science and natural resources competition for middle school and high school students. 5 member teams of students study, train and are then tested on their knowledge of 5 subject areas: Aquatics, Soils, Wildlife, Forestry and Current Environmental Issues.



Through outdoor activities, team work, critical thinking, leadership skills training and more, the Envirothon Program is helping to develop tomorrows informed leaders today! Durham has an active Envirothon Program and is committed to it's growth. District staff will work with each team to coordinate the necessary supplemental training they need to succeed.

For more information on Durham County's Envirothon Program, please call 919-560-0558 or email jbrooks@dconc.gov



NC Envirothon helps to

- ✦ Develop Tomorrow's Informed Leaders
- ✦ Educate Future Resource Stewarts
- ✦ Promote Sustainable Development
- ✦ Create Community Awareness



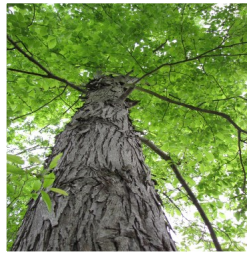
Soils

Resource professionals help students learn soil structure, interpret maps, and evaluate land forms, and soil characteristics that affect urban and agricultural land issues. The students will gain an understanding of what an important ecosystem lies below the surface.



Aquatics

Students study marine and freshwater ecology to assess the quality of delicate aquatic ecosystems. They also learn to identify aquatic organisms, learn about watershed management, and non-point source pollution issues.



Forestry

Students develop an understanding of the practices for maintaining healthy forest ecosystems through the help of professional foresters. They learn the basics of species identification and forest structure and dynamics as well as management.



Wildlife

A favorite for many Envirothon participants, students learn firsthand from wildlife experts about animal populations, their dynamics, and the importance of habitat conservation. Learn identification skills used by wildlife resource professionals in the field.



CEI

Challenged by field professionals, students work as a team to explore the facets of current environmental issues facing our state, nation and world and learn the complexity of real-life environmental decisions.



Teachers Workshops

The Durham SWCD offers 3 different curriculum based workshops for teachers and educators;

1. Project Food, Land & People - a K-12 curriculum that help people better understand the interrelationships among agriculture, the environment and people of the world
2. WOW! Wetlands are Wonderful - a K-12 curriculum that helps people better understand wetlands and their importance in a healthy environment
3. Project Learning Tree - a K-12 curriculum that highlights ways to engage children in outdoor exploration and to bring nature indoors

Teacher CEU and EENC credit hours are available for each workshops.

Interested teachers should contact the District at 919-560-0558 or jbrooks@dconc.gov to inquire about organizing a training at your school or organization.

