

UNION COUNTY CONSERVATION DISTRICT 2011 EDUCATIONAL CATALOG



UNION COUNTY CONSERVATION DISTRICT
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.....SERVING.....ALL SCHOOLS (PUBLIC AND PRIVATE), CONSERVATION CLUB,
BOY & GIRL SCOUTS, YOUTH GROUPS, 4-H, ALL UNION COUNTY RESIDENTS!

Call 570.524.3860 TO SCHEDULE A PROGRAM

TABLE OF CONTENTS

INTRODUCTION Page 1

AQUATICS PROGRAMS Page 2

FORESTRY PROGRAMS Page 3

LAND USE PROGRAMSPage 4

SOILS PROGRAMS Page 5

WILDLIFE PROGRAMSPage 5

GENERAL CONSERVATION PROGRAMS Page 6

ENVIRONMENTAL ED. CURRICULUM SUPPLEMENTSPage 7

INTRODUCTION

The Union County Conservation District was formed at the request of a concerned citizen, who was interested in the conservation of soil and water resources. On March 6, 1957, the Union County Commissioners approved a Soil Conservation District for Union County. The Union County Conservation District was recognized under ACT 217 “State Soil and Water Conservation District Law” by the General Assembly of the Commonwealth of Pennsylvania.

Conservation Districts are a legal subdivision of state government. However, each District is administered by a volunteer group of county residents which is referred to as the “Board of Directors”. The Union County Conservation District Board is composed of nine members: five farmer directors, three urban directors and one county commissioner.

The Union County Conservation District staff and Board of Directors realizes the importance of sound environmental decisions and conservation of our natural resources. Due to the need for continued education among both school children and the general public, this catalog has been created to help familiarize everyone with the Conservation District.

Should any of the outlined programs look fitting for your class or organization, please contact the Conservation District for a free program. We look forward to helping education residents of Union County!

AQUATICS PROGRAMS

1.) POND AND LAKE MANAGEMENT

Grade: 9-12

Time: ½ hour

This program explores the various dynamics of pond and lake management. A variety of topics are covered, including watershed management, point and non-point source pollution, aquatic vegetation control, wildlife management, recreation, permit requirements and a variety of water quality issues.

STANDARDS:

EE

4.1.10A,B,C,D,E

4.1.12A,B,C,D,E

4.3.10B

2.) STREAM STUDIES

Grade: 9-12

Time: 1-2 Hours

Explore a variety of aquatic habitats by studying aquatic life in Buffalo Creek. Learn how to identify macro invertebrates and what the dynamics mean for water quality.

STANDARDS:

EE

4.1.4A,B,C

4.1.7C

4.1.10C

4.1.12C

ST

3.3.4A,B

3.3.7A,D

3.) "WE ALL LIVE DOWNSTREAM"

Grade: 6-8

Time ½ Hour

This program focuses on the relationship between the Susquehanna River and its influence on the Chesapeake Bay. Students will learn about the various pollution problems affecting the Susquehanna River and the impact that pollution has on the Chesapeake Bay's fisheries, wildlife and people.

STANDARDS:

EE

4.1.4E

4.1.7B,C,E

4.1.10A,B,E

4.1.12A,C,E

4.3.10A,B

4.3.12B

4.4.12B

4.5.7B

4.5.10B



WE ALL LIVE DOWNSTREAM

4.) WHAT'S A WATERSHED?

Grade: 6-8

Time: ½ hour

The program focuses on Pennsylvania watersheds and the importance of proper watershed management. Students will learn how to identify and explain what determines the boundary of a watershed by using topographic maps. An Enviroscape model will be used to show how different components of point and non point source pollution can impact a watershed.

STANDARDS:

EE

4.1.4A,B

4.1.7A,B,C

4.1.10A,B,C

4.1.12A,B,C

FORESTRY PROGRAMS

5.) BEARELING THROUGH THE FOREST

Grades: K-3

Time: 1 hour

Students will study habitats and the different components of habitats by exploring their school campus. Participants will learn how bears can be affected by habitat changes and discuss important plants and the term "limiting factor".

STANDARDS:

EE

4.1.4A,B,C,D

4.2.4A,B,C

4.3.4A,B,C

4.6.4A

4.7.4A,B

ST

3.1.4A,C

3.3.4A,B



6.) FOREST CLUMP

Grade: 4-6

Time: 1 hour

This program looks at how dynamic forests are and what types of "things" forest provide to us. An in depth discussion focuses on how dependent humans are on the forest and what we need to do to help save forests.

STANDARDS:

EE

4.2.4A,B,C

4.3.7B

4.6.4A,C

4.2.7A,B,C

4.3.12B

4.6.7A,C

4.2.10A,B,C

4.6.10A,C

4.2.12A,B,C

4.6.12A,C

4.8.4A,B,C,D

4.9.4A

4.9.12A

4.8.7A,B,C,D

4.9.7A

4.8.12A,B,C,D

4.8.10A,B,C,D

4.9.10A

LAND USE PROGRAMS

7.) WADING INTO WETLANDS

Grade: 4-6

Time: ½ hour

This program teaches students the importance of wetlands to both wildlife and human. Students will learn how to identify wetland plants and what actions are being taken to prevent the loss of wetlands.

STANDARDS:

EE

4.1.4A,B,C,D,E

4.1.7C,D,E

4.1.10B,D,E

4.1.12D,E

8.) WHAT WETLAND?

Grade: 6-8

Time: ½ Hour

Students will study various wetland plants species, learn how to identify hydric soils and how to classify different types.

STANDARDS:

EE

4.1.7D,E

4.6.7A

4.7.7A,B,C

4.1.10D,E

4.6.10A

4.7.10A,B,C

4.1.12D,E

4.6.12A

4.7.12A,B,C

4.9.7A

4.9.10A

4.9.12A



9.) POLLUTION SOLUTIONS

Grade: 6-8

Time: ½ Hour

This program focuses on simple things homeowners can do to reduce non-point source pollution.

STANDARDS:

EE

4.3.7A,B

4.5.7A,B,C

4.9.7A

4.3.10A,B

4.5.10A,B,C

4.9.10A

4.3.12A,B

4.5.12A,B

4.9.12A

SOILS PROGRAMS

10.) HOW TO USE A SOIL SURVEY

Students will learn the importance of soils to our every days live. They will learn how to use a county soil survey and to identify different soil types. Union County monoliths will be used in this exercise.

Middle - High 40 minutes – 1 hour

STANDARDS:

EE

4.2.7C

4.3.7B

4.3.10A,B

4.4.7B

4.6.7B

4.6.12A

ST

3.5.7A,B

3.5.10A,B

3.5.12A,B

WILDLIFE PROGRAMS

11.) ENDANGERED & THREATENED SPECIES

Grades: 4-6

Time: 1 Hour

What is an endangered or threatened species? This program focuses on PA threatened and endangered species. Learn why various plants and animals become endangered or threatened and what is being done to save many of our vanishing species.

STANDARDS:

EE

4.7.4A,B,C

4.7.7A,B,C

4.7.10A,B,C

4.7.12A,B,C

12.) WILDLIFE TRACKS

Grades: 4-6

Time: 1 hour

Students will have the opportunity to examine common PA animal tracks. Healthy ecosystems will be discussed and how animals have been able to adapt to human intervention. Students will have the opportunity to make their own animal track.

STANDARDS:

EE

4.7.4A,B

4.7.7A,B

4.7.10A,B



GENERAL CONSERVATION PROGRAMS

13.) ENVIRONMENTAL LAW

Grade: 9-12

Time: ½ Hour

Students will learn how and why environmental regulations are developed, implemented, and enforced.

STANDARDS:

EE

4.9.4A

4.9.7A

4.9.10A

4.9.12A

14.) EROSION & SEDIMENTATION CONTROL

Grade: 6-8

Time: ½ Hour

Sedimentation is the number one pollutant in Pennsylvania. Conservation Districts provide insight and review of any operation that disturbs greater than 5,000 square feet. This program introduces what warrants an “E&S” plan and what Districts look for.

STANDARDS:

EE

4.1.7B

4.2.7A,B,C

4.3.7B

4.1.10B,C

4.2.10B,C

4.3.10A,B

4.1.12C

4.2.12B

4.3.12B

4.4.7B,C

4.6.7A

4.8.7D

4.6.10A

4.8.10C

4.6.12A

ST

3.5.7A

3.5.10B

15.) NUTRIENT MANAGEMENT

Grade: 6-8

Time: ½ Hour

Conservation Districts provide information and technical assistance about the PA Nutrient Management ACT.

STANDARDS:

EE

4.3.7A,B

4.4.7A,B,C

4.5.10B

4.3.10A,B

4.4.10A,B,C

4.3.12B

4.4.12A,B,C

4.9.7A

4.9.10A

4.9.12A



16.) WHAT IS A CONSERVATION DISTRICT

Grade: 6-8

Time: ½ Hour

Students gain insight into environmental job opportunities, and the function of the Conservation District and other related agencies, that work with environmental laws and regulations.

STANDARDS:

EE

4.8.7D

4.9.7A

4.9.10A

4.9.12A

ENVIRONMENTAL EDUCATION CURRICULUM SUPPLEMENTS

Project Learning Tree – This program is sponsored and funded by the Department of Education Office of Environment & Ecology Bureau of Curriculum & Academic Services. Since its introduction in the early 1970s, Project Learning Tree has been recognized as one of the premier environmental education programs in the world. Project Learning Tree is a comprehensive environmental education curriculum. It is not just about trees, it's about the total environment – land, air, and water. It is local, national, and global in scope. Project Learning Tree's pre-K through 8th grade activity guide is arranged under five major themes – Diversity, Interrelationships, Systems, Structure & Scale, and Patterns of Change. Each theme covers the areas of environment, resource management & technology, and society and culture. The Project Learning Tree activities integrate the themes within science, language arts, social studies, art, music, and physical education. Project Learning Tree focuses on developing critical thinking skills. It doesn't try to teach children what to think about the environment. It gives teachers the tools they need to help children to learn how to think about the environment.

Project WET – This program is sponsored and funded by the Department of Education Office of Environment & Ecology Bureau of Curriculum & Academic Services. The "Project WET Curriculum and Activity Guide", for kindergarten through twelfth grades, is a collection of innovative, water-related activities that are hands-on, easy to use, and fun! Project WET activities incorporate a variety of formats, such as large and small group learning, whole-body activities, laboratory investigations, discussion of local and global topics, and involvement in community service projects. Project WET was developed, field-tested, and reviewed by hundreds of educators and resource managers around the country. People's relationships to water are a major theme of the "Project WET Curriculum and Activity Guide". Providing a thorough water education program, the guide also addresses water's chemical and physical properties, quantity and quality issues, aquatic wildlife, ecosystems, and management strategies. Project WET activities promote critical thinking and problem-solving skills and help provide young people with the knowledge and experience they will need to make prudent decisions regarding water resource use. The "Project WET Curriculum and Activity Guide" is available to all formal and non-formal educators through workshops provided by State Project WET coordinators or trained facilitators.

Project WILD – Project WILD is sponsored by the PA Game Commission. The Project WILD Program has been approved by the PA Department of Education for use in schools. Its use will assist teachers at all levels in meeting the environmental education requirements for schools. Project WILD’s primary audience is teachers of kindergarten through high school students. The goal of Project WILD is to assist learners of any age in developing awareness, knowledge, skills and commitment to result in informed decisions, responsible behavior and constructive actions concerning wildlife and the environment upon which all life depends. Project WILD is designed to prepare young people for decisions affecting people, wildlife, and their shared home – Earth.

Project Food Land and People – This program is sponsored and funded by the Department of Education Office of Environment & Ecology Bureau of Curriculum & Academic Services. This program is a K-12, multi-disciplinary, fully integrated, hands-on, activity-driven approach to agriculture education, developed by a non-profit organization made up of agriculture related specialists and teachers. Pennsylvania has been involved in the national Food, Land and People program development by providing teachers as part of the national writing teams and by pilot-testing some of the more than 100 activities. Food, Land and People is a comprehensive agriculture program that incorporates important environmental lessons into all areas of the curriculum. It can be infused into other areas beside environment and ecology, like science, language, arts, social studies, reading, mathematics, economics, technology, the arts, etc. The program uses a variety of skills to teach students how to apply the knowledge base they have learned about food and fiber into their every day lives. Food, Land and People materials are available through a six-hour, teacher training workshop. A two-day, one graduate credit, Penn State Teachers Workshop is held annually by the Bradford County Conservation District. One day is devoted to classroom instruction, the second day includes field trips to area farms.