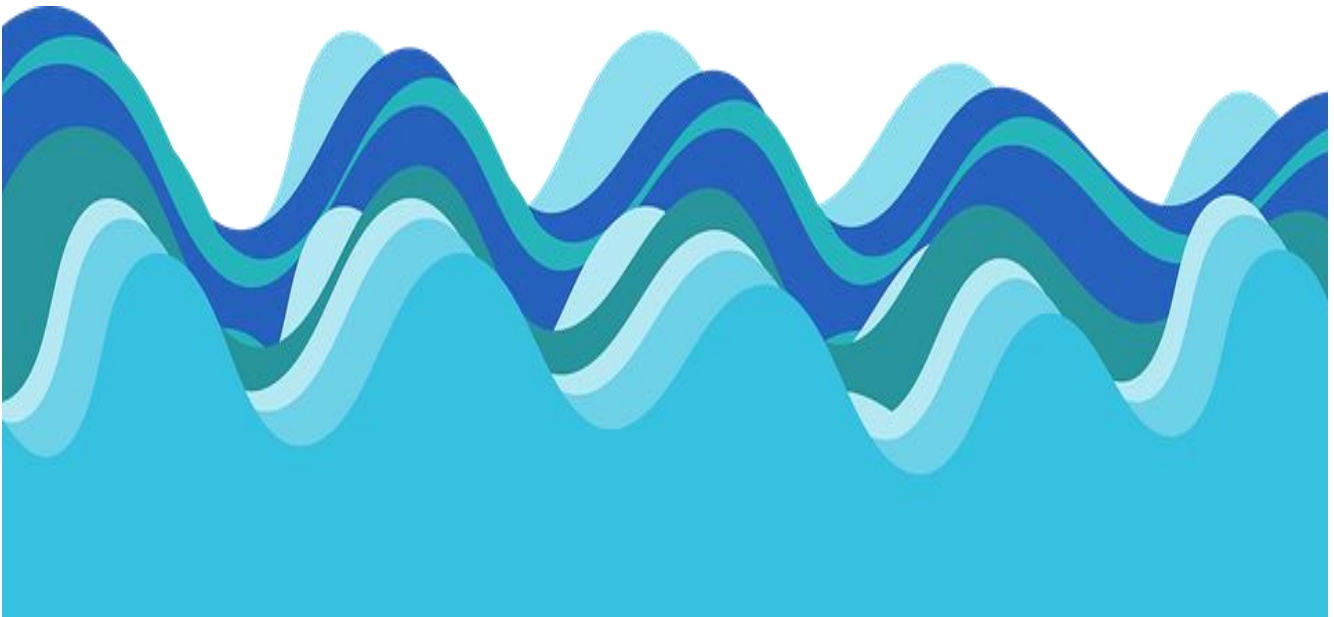


2020 Chester County Envirothon



**Water Resources Management:
Local Control and Local Solutions
Chester County Conservation District
Chester County Facilities & Parks**

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Websites: www.envirothonpa.org
www.chesco.org/conservation

Local contact:

Gaye Lynn Criswell
Envirothon Coordinator
Chester County Conservation District
Phone: (610) 925-4920 ext. 108
Email: gcriswell@chesco.org

INTRODUCTION

Welcome to the Chester County Envirothon! This annual environmental education program is sponsored by the Chester County Conservation District along with the Chester County Facilities and Parks at Hibernia County Park. Students in grades 3-12 from public, private, parochial, and home schools celebrate months of research, exploration, and preparation with a fun outdoor competition and measure of learning.

The Chester County Envirothon is a component of the Pennsylvania Envirothon Program which helps students understand the natural environment and their role in it. The Envirothon provides a means for students to demonstrate what they know about the environment. It is a cumulative process that addresses the learning levels of awareness, knowledge, attitudes, and application. Students who participate in the Envirothon will demonstrate an understanding of environmental concepts, of how human activity impacts the environment, and of how people can work together as partners in conservation practices to enhance their lives and quality of life by protecting the environment.

Information for new teams and schools: The Chester County Envirothon begins with classroom study and outdoor experiences that help students get to know the great forces of nature – aquatics, soil, forestry, wildlife, and the current issue. Each five (5) member team rotates through each station and works as a team through a test on each of the events until all stations are completed.

Thank you for your interest in the Chester County Envirothon and we hope you join the network of educators, students, parents, conservation partners, and community supporters already involved in this exciting environmental learning experience.

Chester County Conservation District
688 Unionville Road, Suite 200
Kennett Square, PA 19348
Phone: (610) 925-4920
Fax: (610) 925-4925
www.chesco.org/conservation

Chester County Facilities and Parks
313 West Market Street, Suite 5402
P.O. Box 2748
West Chester, PA 19380-0991
Phone: (610) 344-6220
Fax: (610) 344-5984
www.chesco.org/ccparks

OVERVIEW OF CHESTER COUNTY ENVIROTHON

LOCATION:

Hibernia County Park – Phone: (610) 383-3812

DATES:

Wednesday	May 6, 2020	Elementary Level
Thursday	May 7, 2020	Secondary Level (Middle School & Senior)

TIME:

Elementary Level	9:30 a.m. – 2:15 p.m. (Wednesday)
Secondary Level	8:30 a.m. – 1:30 p.m. (Thursday)

COST:

The Envirothon is free to all participating Chester County Schools.

FORMAT:

There are three levels of competition:

Elementary Level:	Grades 3-5
Middle School Level:	Grades 6-8
Senior Level:	Grades 9-12

Teams are comprised of 5 students and a coach. There will be a limited number of teams and school registrations based on site facilities and quality control for the event. Private, parochial schools, and home schoolers will be permitted to register teams on a school-by-school basis (depending on overall team participation). **The Senior Level may not rotate alternate students into the competition and must have a team of 5; all other levels must notify Registration at check-in if planning to alternate students into the competition.**

A Senior Team of less than 5 will not be scored and will be considered an exhibition team.

EVENTS:

All events are to be competed as team events.

This year's Environmental Issue is "*Water Resources Management: Local Control and Local Solutions.*"

Elementary Level (Grades 3-5)

- ☼ Wildlife (Birds and Mammals)
- ☼ Forestry (Trees, Shrubs, and Vines)
- ☼ Aquatics (Fish, Invertebrates, and Amphibians/Reptiles)
- ☼ Environmental Issue
- ☼ Outdoor Safety
- ☼ Craft – non-testing

Middle School Level (Grades 6-8)

- ☼ Wildlife (Birds and Mammals)
- ☼ Forestry (Trees, Shrubs, Vines, Wildflowers, and Non-Flowering Plants)
- ☼ Aquatics (Fish, Invertebrates, Amphibians, and Reptiles)
- ☼ Environmental Issue
- ☼ Introductory Soils

Senior Level (Grades 9-12)

- ☼ Wildlife
- ☼ Forestry
- ☼ Aquatics
- ☼ Environmental Issue
- ☼ Soils

TEAM PREPARATION:

All teams are responsible for their own preparation. Teams may arrange visits to Chester County parks for study sessions. Guest speakers and outside resource people are the responsibility of each team. The Pennsylvania Teacher Resource Packet provides a listing of state resource contacts.

STUDY RESOURCES:

The majority of the resources are available on-line. Please visit www.envirothonpa.org for updated information. The Bird Songs and Frog Calls are the only CDs that are current.

TRANSPORTATION:

Transportation to/from Hibernia County Park is the responsibility of each team.

TEAM REGISTRATION/T-SHIRT ORDERS:

The deadline for the registration/T-shirt order form is **Friday, February 21, 2020**. If the form is not returned by this date, the team is not registered and T-shirts will not be ordered. The team registration/T-shirt order form can be found in this booklet. Each team will receive five T-shirts for students and two T-shirts per school for coaches (additional shirts may be purchased). The T-shirt order form must include sizes and amounts; however, the students' names are not necessary.

JUDGING:

All of the judges are volunteers who are providing their time and service. They represent staff from the Chester County Conservation District and Chester County Facilities & Parks, as well as representatives from federal, state, and local agencies, private companies, and individuals dedicated to conservation.

SUPPLIES:

Each team must bring their own clipboard and pencils/pens. Field guides or additional resources are NOT permitted.

LUNCH:

All Envirothon participants must bring their own lunch and drink to the competition. Refrigeration is not available.

SNACK:

A snack break will occur for the Elementary Level only. Participants must bring their own snack.

AWARDS:

Elementary Level: The top score in each category will receive recognition and a prize.

Secondary Level: The top score in each category will receive recognition and a prize. The top three overall scores will receive trophies. In the event of a tied score, the score from the Environmental Issue category will serve as the first tie breaker. The score from the Soils category will serve as the second tie breaker.

2020 ENVIROTHON TIMELINE

Tuesday, January 14, 2020

(9:00 a.m. – 11:00 a.m.)
Government Services Center
601 Westtown Road
West Chester, PA 19380

Teacher/Coach Orientation Session for all teams. You are encouraged to attend this meeting – important information is presented and pertinent materials (study resources and resource agency contacts) are distributed.

Friday, February 21, 2020

Registration and T-shirt Order **DEADLINE.**

Wednesday, May 6, 2020

9:30 a.m. – 2:15 p.m.
Hibernia County Park

Envirothon competition for
Elementary Level (Grades 3-5)

Thursday, May 7, 2020

8:30 a.m. – 1:30 p.m.
Hibernia County Park

Envirothon competition for
Middle School Level (Grades 6-8) and
Senior Level (Grades 9-12)

**Tuesday, May 19, 2020 and
Wednesday, May 20, 2020**

Susquehanna University and Camp Mount Luther

Pennsylvania State Envirothon
State Envirothon for Senior Level (Grades 9-12)

First place team in Chester County advances to the state level.

For more information, contact:

Lorelle Steach, Executive Director

E-mail: Isteach@envirothonpa.org

(814) 623-7900 x111 ~ FAX (814) 690-1682

The winning team of the Pennsylvania State Envirothon will advance to the

NCF – National Conservation Foundation Envirothon

July 26 – August 1, 2020

University of Nebraska, Lincoln

TEACHER/COACH RESPONSIBILITIES

ROLE:

The teacher/coach position is the catalyst behind the Chester County Envirothon Program. The teacher/coach provides leadership by presenting the program to the students, organizing a team, and supporting the students/volunteers with preparation for each event. Each team may have one or two coaches at the event.

RESPONSIBILITIES:

1. Attend the teacher/coach meeting on **January 14, 2020** to receive the Envirothon information for the current year.
2. Present the Envirothon program and materials to the students/volunteers and encourage participation.
3. Organize a team and submit the team's registration by completing the Envirothon Team Registration and T-shirt Order Form contained in this booklet. Each team will receive five T-shirts for students and two T-shirts per school for coaches (see the order form at the end of this manual for additional information). The team registration/T-shirt order form is due by **February 21, 2020**. Forms can be faxed to (610) 925-4925. If additional T-shirts are needed, the form along with the payment for the extra shirts can be mailed to the Chester County Conservation District, 688 Unionville Road, Kennett Square, PA 19348.
4. Secure a signed photo release form for each team member and mail them to the Chester County Conservation District, 688 Unionville Road, Kennett Square, PA 19348. (In lieu of mailing, signed photo release forms can be submitted at the registration table on the morning of the competition.)
5. Work with your team by using resources such as this booklet, information packets, web sites, library resources (establishing your own classroom Envirothon library is extremely helpful), guest speakers, outdoor sessions at county parks, and a Hibernia County Park site visit.
6. Attend the Chester County Envirothon with your respective team(s). Supervise the team as they move between events and for safety considerations.
7. Complete the Envirothon Program Evaluation form contained in this booklet and submit it before the awards program at the Envirothon.

A successful event depends on your dedication to your team. We look forward to working with you. We want to thank you for all your effort as an Envirothon coach!

CHESTER COUNTY RULES, REGULATIONS, AND POLICIES

1. Judges' decisions will be final on all issues.
2. Only station judges may provide resources, such as an identification key, to be used at a testing station. Teams are NOT PERMITTED to carry or use other resource guides/study materials or any other reading materials during the competition. There are no exceptions to this rule.
3. Each team must have a designated coach who **must accompany and supervise** the team during the competition.
4. Elementary and Middle School Level teams will be comprised of a minimum of four and a maximum of five students. Senior Level teams **will contain five** students in order to compete. *If less than 5 students are on a Senior Level Team, this team will be considered an exhibition team and will not be scored.* The Senior Level may not rotate alternate students into the competition; all other levels must notify Registration at check-in if planning to alternate students into the competition.
5. State regulations emphasize that **NO** video or audio taping devices, including cell phones, may be used at test stations. **Teachers/coaches must retain all electronic devices.**
6. All team members will participate at each test station. The team members will travel to stations together, competing as a team. Teachers/Coaches will rotate with the team. Teams remain at the testing station until the signal for moving onto the next station is given.
7. All events are team events (all students working on the same examination).
8. If any member of a team is caught cheating, the entire team will be disqualified from the Envirothon. Test copies must remain at the testing stations. **Senior Level Tests are NOT to be distributed NOR copied. This is a state policy.**
9. **Once an event has started, a teacher/coach may not instruct or interact with his/her team.** Please stay back and allow your team to interact with the event judge. Coaches are welcome to listen during the station review if time permits. During this time, a team may ask for an explanation or clarification; however, all judges' decisions are final.
10. After all participating teams have completed each event, the individual team scores will be delivered to the official scoring table. No scores will be posted for viewing during the competition. Scores will be posted during the awards ceremonies at the end of the day.
11. The Envirothon is a rain or shine event; however, extreme hazardous weather conditions may result in a cancellation. There are no make-up days for the Middle School or Elementary Levels.

ELEMENTARY LEVEL (Grades 3-5)

EVENTS:

- ☀ Environmental Issue
- ☀ Outdoor Safety
- ☀ Craft – non-testing
- ☀ Wildlife (Birds and Mammals)
- ☀ Forestry (Trees, Shrubs, and Vines)
- ☀ Aquatics (Fish, Invertebrates, and Amphibians/Reptiles)

☀ **Environmental Issue 2020-**“*Water Resources management: Local Control and Local Solutions.*” See PA Envirothon website www.envirothonpa.org

Teams should be familiar with the following: definitions(s) of the issue, associated vocabulary, problems/solutions, advantages/disadvantages, history, law and land use issues, the issue’s impact on Chester County and global environment and residents, plus the local and state agencies that monitor this issue.

☀ **Outdoor Safety**

Identification: Teams will need to identify winter and summer clothing, sun protection items, water bottles, and the types and causes of both Lyme disease and West Nile virus.

Conceptual: Teams should be familiar with how to dress in layers and what items should be used to protect themselves from different elements such as sun, wind, rain, insects, and severe weather. They should be able to recognize emergency situations, know how to call for help, and know how to protect themselves.

☀ **Craft**

This is a non-testing station.

☀ **Snack**

A 10-minute snack break will occur between events 3 and 4. Please bring your own snack.

ELEMENTARY LEVEL (Grades 3-5)

☀ Wildlife (Birds and Mammals)

Conceptual: Teams should be familiar with the following: habitat requirements (food preferences, nesting/shelter, types of habitats), migration, hibernation, basic predator/prey relationships, general physical characteristics, and state agencies involved with protection and management of the birds/mammals.

Identification: Teams will need to know the specimens named on the study lists below. The following will be used at the competition:

- Visuals (mounted specimens, photographs, skins, parts of the animals) of all species on the study lists
- Vocalizations (songs/calls) of only the species on the study lists identified by *
- Mammal tracks of only the species on the study lists identified by **

Birds

Bald Eagle
Osprey
Red Tail Hawk
Great Horned Owl*
Eastern Screech Owl*
Barn Owl
American Kestrel*
Vulture
Red-Bellied Woodpecker
Pileated Woodpecker
Great Blue Heron
Mallard Duck*
Ruffed Grouse
Crow
Turkey
Bluebird
Blue Jay
Northern Cardinal*
Ruby Throated Hummingbird
Red Wing Blackbird
Baltimore Oriole
Mourning Dove
Tree Swallow
House Wren
Tufted Titmouse

Mammals

Muskrat
River Otter
Raccoon
Opossum
Striped Skunk
Gray Squirrel
Red Squirrel
Beaver
Bobcat**
Coyote
Red Fox**
Gray Fox
White Tail Deer**
Mink
Eastern Chipmunk
Cottontail Rabbit**
Woodchuck
Black Bear**
Little Brown Bat
Red Bat
Eastern Mole
White-Footed Mouse
Short-Tailed Shrew
Meadow Vole
Weasel

NOTE: Students must be able to identify all species on all lists.
*Students must know vocalizations of these species.
**Students must know the tracks of these species.

ELEMENTARY LEVEL (Grades 3-5)

☀ Forestry (Trees, Shrubs, and Vines)

Identification: Teams will need to know the specimens named on the study lists below. Specimens (entire plant, bark, leaves, seeds/fruits) and photographs will be used at the competition. The natural environment at Hibernia County Park will be utilized as much as possible.

Conceptual: Teams should be familiar with the following: tree growth, basic physical characteristics of trees (bark, roots, leaves), photosynthesis, seed dispersal, seasonal changes, basic forestry management practices, and the state agencies that govern forests.

Forestry Study Lists:

TREES

American Beach
American Chestnut
American Elm
Black Walnut
Eastern Hemlock
Eastern Red Cedar
Eastern White Pine
Flowering Dogwood
Northern Red Oak
Pin Oak
Red Maple
Sassafras
Shagbark Hickory
Sycamore
Tulip Poplar
White Ash
White Oak

SHRUBS

Mountain Laurel
Spicebush
Staghorn Sumac
Witch Hazel

VINES

Bittersweet
Poison Ivy
Trumpet Vine

NOTE: Students must be able to identify all species on all lists.

ELEMENTARY LEVEL (Grades 3-5)

☀ Aquatics (Fish, Invertebrates, and Amphibians/Reptiles)

Conceptual: Teams should be familiar with the following: basic physical/chemical characteristics of water (various aquatic environments, pH, dissolved oxygen, temperature), aquatic habitat requirements (food preferences, predator/prey relationships, food chains), life cycles (metamorphosis, nymph-vs.-larva), characteristics/adaptations of aquatic animals (fins, insect body parts), and the state agencies that regulate aquatic resources.

Identification: Teams will need to know the specimens named on the study lists below. Live, preserved, and mounted specimens, as well as photographs will be used at the competition. Students need to study both the adult and immature forms of the invertebrates and amphibians on the study lists identified by ***.

Aquatics Study Lists:

FISH

American Eel
Brook Trout
Channel Catfish
Largemouth Bass
Sunfish

INVERTEBRATES

Cranefly***
Crayfish
Damselfly***
Dobsonfly***
Dragonfly***
Mayfly***
Snail
Stonefly***
Water Boatman
Water Penny***
Whirligig Beetle

AMPHIBIANS/REPTILES

American Toad***
Black Rat Snake
Bullfrog***
Eastern Box Turtle
Eastern Garter Snake
Northern Green Frog***
Snapping Turtle
Spotted Salamander

NOTE: Students must be able to <u>identify</u> all species on all lists. ***Students must know the <u>adult & immature forms</u> of these species.
--

MIDDLE SCHOOL LEVEL (Grades 6-8)

EVENTS:

- ☀ Environmental Issue
- ☀ Introductory Soils
- ☀ Forestry (Trees, Shrubs, Vines, Wildflowers, and Non-Flowering Plants)
- ☀ Aquatics (Fish, Invertebrates, Amphibians, and Reptiles) Introductory Soils
- ☀ Wildlife (Birds and Mammals)

☀ **Environmental Issue – 2020 – Water Resources Management: Local Control and Local Solutions**

The majority of the resources are available on-line. Please look through the information from the PA Envirothon - Current Issue topics. www.envirothonpa.org

Teams should be familiar with the following: definitions of issue, associated vocabulary, problems/solutions, advantages/disadvantages of issue, its impact on Chester County's environment and residents, as well as the state agencies responsible for the current issue.

A list will be provided at the time of the coaches meeting and will also be sent on line.

☀ **Introductory Soils**

Teams should understand basic soils knowledge, identify and describe soil types, understand topographical and land use maps, and be aware of soil and land related concerns.

Terms

- Soil composition – sand, silt, clay, humus
- Rock types – igneous, sedimentary, metamorphic
- Parent material
- Topography/Topographic Map
- Soil survey maps and data tables: Websoilsurvey
- Vegetation
- Climate
- Soil texture
- Erosion
- Soil structure – granular, blocky, platy, prismatic, columnar and massive
- Soil nutrients – Nitrogen, Phosphorus and Potassium
- Land use – cropland, pasture, forest, water
- Soil food web – shredders, photosynthesizers, predators, decomposers
- Non-point source pollution
- Soil horizons

Skills

Students should know how to read a soil survey, topographic map (including symbol identifications), soil texture key (included) and Soil Textural Triangle, and identify soil horizons.

USDA/NRCS Conserving Soil Activity Masters 1-24

MIDDLE SCHOOL LEVEL (Grades 6-8) continued

☀ **Forestry (Trees, Shrubs, Vines, Wildflowers, Non-Flowering Plants)**

Identification: Teams will need to know the specimens named on the lists below. Specimens (entire plant, bark, leaves, seeds/fruits) and photographs will be used at the competition. The natural environment at Hibernia County Park will be utilized as much as possible.

Conceptual: Teams should be familiar with the following: tree growth, photosynthesis, seed dispersal, seasonal changes, common wood products and/or plant uses, poisonous/non-poisonous plants, succession, physical plant/tree structure (roots, leaves, bark), decomposition, forest hydrology, basic forest management practices, and the state agencies that govern forests.

Forestry Study Lists: **In addition to the study lists below, the Middle School Level is also responsible to know the Elementary Level study lists.**

TREES

Ailanthus
American Beech
American Chestnut
American Elm
Black Cherry
Black Walnut
Eastern Hemlock
Eastern Red Cedar
Eastern White Pine
Flowering Dogwood
Northern Red Oak
Pin Oak
Red Maple
Sassafras
Shagbark Hickory
Sugar Maple
Sycamore
Tulip Poplar
White Ash
White Oak

SHRUBS

Maple-leaf Viburnum
Mountain Laurel
Spicebush
Staghorn Sumac
Witch Hazel

VINES

Bittersweet
Poison Ivy
Trumpet Vine
Virginia Creeper

WILDFLOWERS

Common Blue Violet
Jack-in-the-Pulpit
May Apple
Skunk Cabbages
Solomon's Seal
Spring Beauty
Trout Lily

NON-FLOWERING PLANTS

Christmas Fern
Sensitive Fern

*****Middle School Level students are also responsible for the Elementary Level list*****

NOTE: Students must be able to <u>identify</u> all species on all lists.

MIDDLE SCHOOL LEVEL (Grades 6-8) continued

☀ Aquatics (Fish, Invertebrates, Amphibians, and Reptiles)

Identification: The following will be used at the competition:

- Visuals (live, preserved & mounted specimens, and photographs) of all species on the Aquatics lists
- Vocalizations of the amphibians on the list identified by *
- Adult and immature forms of only the species on the invertebrates and amphibians lists identified by ***
- Vocalization and adult & immature forms of the species on the amphibian list identified by ****

Conceptual: Teams should be familiar with the following: basic physical/chemical characteristics of water (various aquatic environments, pH, dissolved oxygen, temperature), aquatic habitats (food preferences, predator/prey relationships), hydrologic cycle, characteristics/adaptations of aquatic animals, and state agencies that regulate aquatic resources.

Aquatic Study Lists: **In addition to the study lists below, the Middle School Level is also responsible to know the Elementary Level study lists.**

<i>FISH</i>	<i>INVERTEBRATES</i>	<i>AMPHIBIANS</i>	<i>REPTILES</i>
American Eel	Caddisfly***	American Toad*	Black Rat Snake
American Shad	Crane fly***	Bullfrog****	Eastern Box Turtle
Blacknose Dace	Crayfish	Mudpuppy	Eastern Garter Snake
Blue Gill	Damselfly***	Northern Green Frog****	Northern Ringneck Snake
Brook Trout	Dobsonfly***	Pickerel Frog****	Northern Water Snake
Channel Catfish	Dragonfly***	Redback Salamander	Snapping Turtle
Common Carp	Giant Water Bug	Spotted Salamander	Timber Rattlesnake
Largemouth Bass	Mayfly***	Spring Peeper*	
Northern Pike	Snail		
Sunfish	Stonefly***		
Walleye	Water Boatman		
	Water Penny***		
	Whirligig Beetle		
	Zebra Mussel		

Middle School Level students are also responsible for the Elementary Level list

NOTE:

Students must be able to identify all species on all lists.

***Students must know vocalizations of these species.**

*****Students must know the adult & immature forms of these species.**

******Students must know both the vocalization and adult & immature forms of this species.**

MIDDLE SCHOOL LEVEL (Grades 6-8) continued

☀ Wildlife (Birds and Mammals)

Identification: Teams will need to know the specimens named on the study lists below. The following will be used at the competition:

- Visuals (mounted specimens, photographs, skins, parts of the animals) of all species on the study lists
- Vocalizations (songs/calls) of only the species on the study lists identified by *
- Mammal tracks of only the species on the study lists identified by **

Conceptual: Teams should be familiar with the following: habitat requirements (food preferences, nesting/shelter, types of habitats), migration, hibernation, basic predator/prey relationships, general physical characteristics, and state agencies involved with protection and management of the birds/mammals.

Birds

Bald Eagle*
Osprey
Red Tail Hawk
Great Horned Owl*
Eastern Screech Owl*
Barn Owl*
American Kestrel*
Vulture
Red-Bellied Woodpecker
Pileated Woodpecker
Great Blue Heron
Mallard Duck*
Ruffed Grouse
Crow
Turkey
Bluebird
Blue Jay
Northern Cardinal*
Ruby Throated Hummingbird
Red Wing Blackbird*
Baltimore Oriole*
Mourning Dove*
Tree Swallow
House Wren
Tufted Titmouse

Mammals

Muskrat
River Otter
Raccoon**
Opossum**
Striped Skunk**
Gray Squirrel**
Red Squirrel
Beaver**
Bobcat**
Coyote
Red Fox**
Gray Fox
White Tail Deer**
Mink
Eastern Chipmunk
Cottontail Rabbit**
Woodchuck
Black Bear**
Little Brown Bat
Red Bat
Eastern Mole
White-Footed Mouse
Short-Tailed Shrew
Meadow Vole
Weasel

NOTE: Students must be able to identify all species on all lists.
*Students must know vocalizations of these species.
**Students must know the tracks of these species.

SENIOR LEVEL (Grades 9-12)

EVENTS:

- ☼ Environmental Issue
- ☼ Soils
- ☼ Forestry
- ☼ Aquatics
- ☼ Wildlife

The Pennsylvania Envirothon Program determines topics and content. The majority of the resources are available on-line. Please visit www.envirothonpa.org for updated information. The Bird Songs and Frog Calls are the only CDs that are current.

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2020 ENVIROTHON TEAM REGISTRATION AND T-SHIRT ORDER FORM

DUE: FRIDAY, FEBRUARY 21, 2020
(Please type or print clearly)

Team/School: _____

Address: _____

Coach(es) Name(s): _____

School District: _____

Phone #: _____ Fax #: _____

Email Address: _____

Teams Registering	Competition Level	T-Shirt Orders Per Team				
		Adult Small	Adult Medium	Adult Large	Adult X-Large	Adult XX-Large
Team A						
Team B						
Team C						
Coaches						
TOTAL:						

Competition Level
 Elementary Level-EL (Grades 3-5) Middle School Level-MS (Grades 6-8) Senior Level-SR (Grades 9-12)

T-shirt Order Instructions: Each Team – Five (5) members for each team receive T-shirts free of charge and a total of two (2) coaches for each school registered receive T-shirts free of charge. Additional T-shirts (for volunteers, parents, supporters, etc.) can be ordered at \$5.00 per shirt. **Multiple team orders can be combined on one check, payable to: Chester County Conservation District Envirothon. T-shirt orders and payment, if required, are due on February 20, 2020.** Once an order is placed, it is final. No size changes or substitutions are possible. No late orders will be processed.

Additional T-shirt Order:
 _____ x \$5.00 = \$ _____ (enclosed) Sizes: _____

Remit form and payment to: Chester County Conservation District
 688 Unionville Road, Suite 200
 Kennett Square, PA 19348

NOTE: Forms without an additional T-shirt order can be faxed to (610) 925-4925.
 Send to the attention of **Annette Ives**

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2020 ENVIROTHON PHOTO RELEASE

(Please type or print clearly)

School: _____

School District: _____

Student Name: _____

Student Address: _____

Parent/Guardian
Name: _____

I hereby grant my consent for use of my child's name, voice, photograph, image and/or likeness, by the Chester County Envirothon or an agency it designates for unlimited broadcast, re-broadcast, print and other reproduction for any media use related to the promotion of the Envirothon program.

I further release the Chester County Envirothon or any media agency it designates from any responsibility for remuneration or consideration.

(Student Signature)

(Parent/Guardian Signature)

(Date)

Please submit this form to the student's Envirothon Coach as soon as possible.

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EnviroScape Information

ATTENTION: ENVIROTHON COACHES

To help your students study for non-point source pollution and how it relates to the Environmental Issue, the Chester County Conservation District has EnviroScape models that can be borrowed for your use in the classroom.

We have three EnviroScape models – one entitled “Drinking Water and Wastewater Treatment” and two entitled “Non-Point Source” that demonstrate non-point source pollution and best management practices. These EnviroScapes may be used for testing in 2020.

Please note the description of the EnviroScape Non-point Source model on the next page. It is a perfect, hands-on teaching tool with complete instructions and directions for use. It comes complete with all parts, supplies, and materials.

Please contact Cori Trice, Watershed Coordinator, at ctrice@chesco.org to reserve a model.

The model can be used free-of-charge for two weeks. Due to rising transportation costs, we may ask you to either pick up or drop off the model at the Conservation District office.

Chester County Conservation District

688 Unionville Road, Suite 200
Kennett Square, PA 19348
Phone: (610) 925-4920
Fax: (610) 925-4925
Hours: 8:00 a.m. – 4:00 p.m.
www.chesco.org/conservation

EnviroScape® Nonpoint Source

We all live in a watershed, with water pollution coming from many sources.

EnviroScape® Nonpoint Source shows pollution from nonpoint sources, such as

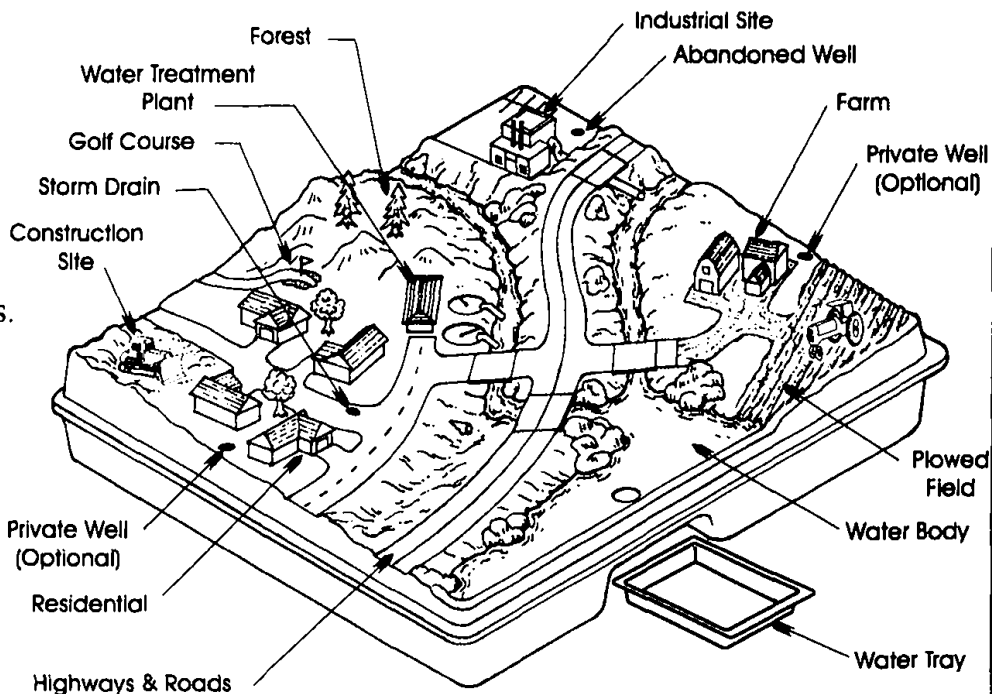
- residential areas,
- forestry,
- transportation,
- recreation,
- agriculture,
- construction, as well as from
- industry as a point source.

Pollution and runoff are visually apparent when rain carries soil (cocoa), chemicals (colored drink mixes) and oil (cocoa and water mixture) through the watershed to a pond, lake, river or ocean.

Best management practices include felt buffer strips as vegetation, clay to create berms and other methods to show conservation and water pollution prevention measures at work.

CONTENTS: Nonpoint source topographical map (top), clear base, houses, barn, factory, drain pipe, treatment plant, trees, golf flags, cows, cars and best management practices such as buffer strips, clay berms, manure container, soil, oils and chemicals (cocoa, drink mixes and oil mix), bridges, watercatcher, rainmaker, water plug and User's Guide.

DIMENSIONS: approximately 25" x 30" x 5"



Abandoned and private wells are for use with Groundwater Kit (optional)

What Users Say ...

"*EnviroScape is the leading teaching tool* that water educators have for portraying the complexity and importance of water quality practices. We have used EnviroScape at every one of our Children's Groundwater Festivals. And, the expansion of the program and supplemental teaching materials just keep getting better through time."

– SUSAN SEACREST, President, The Groundwater Foundation

"*It's a people thing.* At Cargill, the employees are the volunteers who go into the communities. With EnviroScape, they can show why pollution prevention is important for everyone. It's our way of giving back and more."

– BILL PRESTON, Cargill, Saginaw, Foods Division

ITEM #	EnviroScape Product (price + shipping)
71005C	EnviroScape Nonpoint Source \$679 + \$25 shipping

JT&A, inc. • (703) 631-8810
www.enviroscapecom



Patent No. 5,427,530
info@enviroscapecom

2020 CHESTER COUNTY ENVIROTHON EVALUATION

Name: _____

School and Level: _____

Was the handbook helpful in orienting you to the program: Yes () No ()

How can we improve the handbook?

Was the pre-program information (meetings, conversations, correspondence) adequate in preparing your team for the event: Yes () No ()

What information would you like to see added or dropped?

2020 TOPICS (please comment on the topics in your level only)

	Poor	Average	Good	Excellent
ELEMENTARY LEVEL				
Wildlife	()	()	()	()
Forestry	()	()	()	()
Aquatics	()	()	()	()
Environmental Issue	()	()	()	()
Outdoor Safety	()	()	()	()
 MIDDLE SCHOOL LEVEL				
Wildlife	()	()	()	()
Forestry	()	()	()	()
Aquatics	()	()	()	()
Environmental Issue	()	()	()	()
Introductory Soils	()	()	()	()
 SENIOR LEVEL				
Wildlife	()	()	()	()
Forestry	()	()	()	()
Aquatics	()	()	()	()
Environmental Issue	()	()	()	()
Soils	()	()	()	()

Additional comments/suggestions for Envirothon preparation, events and field day:

Please rate the overall quality of the Envirothon program on a scale of 1-5 by circling the appropriate rating (1 = **LOWEST** rating, 5 = **HIGHEST** rating).

1 = Poor, 2 = Improve, 3 = Average, 4 = Good, 5 = Excellent

COMMENTS:

Educational experience	1	2	3	4	5	_____
Courtesy of staff	1	2	3	4	5	_____
Preparation information	1	2	3	4	5	_____
Fairness of scoring	1	2	3	4	5	_____
Host Site (Hibernia County Park)	1	2	3	4	5	_____

Additional overall comments:

Thank you for making the Chester County Envirothon an exciting educational event!

Please submit the evaluation form at the REGISTRATION table before the awards program.

SCHEDULE OF EVENTS

Wednesday, May 6, 2020 - Elementary Level (Grades 3-5)

09:30 a.m. - 09:50 a.m.	Arrival at Hibernia County Park ★ Check-in/Registration
09:50 a.m. - 10:00 a.m.	Introductions and Announcements
10:05 a.m. - 10:25 a.m.	Event #1
10:30 a.m. - 10:50 a.m.	Event #2
10:55 a.m. - 11:15 a.m.	Event #3 - stay for snack at end
11:15 a.m. - 11:25 a.m.	SNACK - students must supply own snack
11:30 a.m. - 11:50 a.m.	Event #4
11:55 a.m. - 12:15 p.m.	Event #5
12:20 p.m. - 12:40 p.m.	Event #6
12:45 p.m. - 01:30 p.m.	Lunch & Environmental Program
01:30 p.m. - 02:00 p.m.	Awards Presentation
02:15 p.m.	Departure

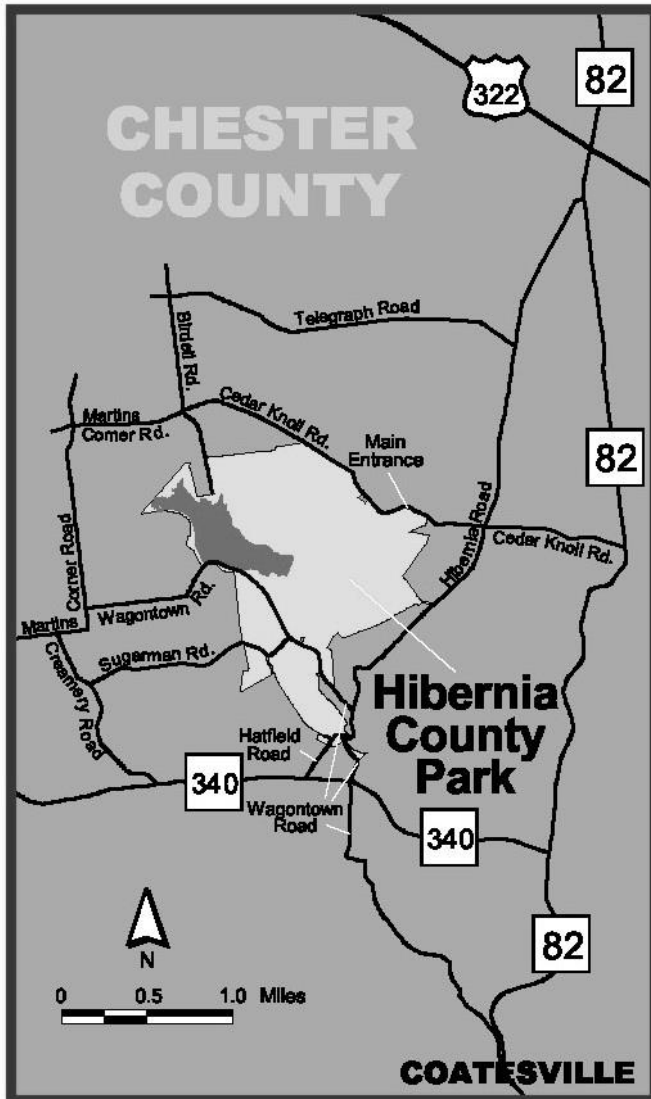
Thursday, May 7, 2020 – Middle School Level (Grades 6-8) & Senior Level (Grades 9-12)

08:30 a.m. - 09:00 a.m.	Arrival at Hibernia County Park ★ Check-in/Registration
09:00 a.m. - 09:10 a.m.	Introductions and Brief Orientation
09:15 a.m. - 09:45 a.m.	Event #1
09:50 a.m. - 10:20 a.m.	Event #2
10:25 a.m. - 10:55 a.m.	Event #3
11:00 a.m. - 11:30 a.m.	Event #4
11:35 a.m. - 12:05 p.m.	Event #5
12:15 p.m. - 12:45 p.m.	Lunch
12:45 p.m. - 01:15 p.m.	Awards Presentation
01:30 p.m.	Departure

NOTES

**Hibernia County Park
Park Road
Coatesville, PA 19320
(610) 383-3812**

Four miles north of Coatesville on
Route 82 in West Caln Township,
Chester County, PA



From Pennsylvania Turnpike:

Pennsylvania Turnpike Downingtown Exit #312

Exit onto Route 100 South to Route 113 South
Route 30 Bypass West to Route 82 North
Proceed 2 miles to Cedar Knoll Road at crest of hill
Turn left on Cedar Knoll Road, Follow signs

Pennsylvania Turnpike Morgantown Exit #298

Exit onto Route 10 South into Morgantown
Route 23 East to Route 401 South
Route 82 South, cross Route 322
Turn right onto Cedar Knoll Road, Follow signs

From Pottstown Area and North:

Route 100 South to Route 23 West
Route 345 South
Route 82 South, cross Route 322
Turn right onto Cedar Knoll Road, Follow signs

From Honey Brook Area and Northwest:

Route 322 East to Route 82 South
Turn right onto Cedar Knoll Road, Follow signs

From Downingtown/West Chester & Southeast:

Route 322 West through West Chester & Downingtown
Enter Route 30 Bypass West to Lancaster -or-
Enter Route 30 Bypass West in Exton
Either way,
Exit onto Route 82 North
Proceed 2 miles to Cedar Knoll Road at crest of hill
Turn left on Cedar Knoll Rd, Follow signs

From Nottingham/Oxford and Southwest:

Route 10 North
Route 30 East, Enter Route 30 Bypass/Coatesville
Exit onto Route 82 North/Coatesville; Turn left
Proceed 2 miles to Cedar Knoll Rd at crest of hill
Turn left onto Cedar Knoll Road, Follow signs

From King of Prussia Area and East:

Schuylkill Expressway West exiting onto Route 202 South
Exit onto Route 30 Bypass West - Coatesville/Lancaster
Route 82 North/Coatesville exit, Turn left
Proceed 2 miles to Cedar Knoll Road at crest of hill
Turn left onto Cedar Knoll Rd, Follow signs

From Lancaster County and West:

Route 30 East; Enter Route 30 Bypass/Coatesville
Exit onto Route 82 North/Coatesville, Turn left
Proceed 2 miles to Cedar Knoll Road at crest of hill
Turn left on Cedar Knoll Rd, Follow signs