



Member's Guide

4-H Wildlife Conservation Program, Unit 1

Wildlife Is All Around Us

BOOK 5. Winter



Wildlife Is All Around Us is Unit 1 of the Pennsylvania 4-H Wildlife Conservation Program. This unit will introduce you to the major groups of wildlife, the animals' basic needs, and where the animals can be found. By working through the projects in this unit, you will become more aware of the animals around you and the signs and clues they leave behind.

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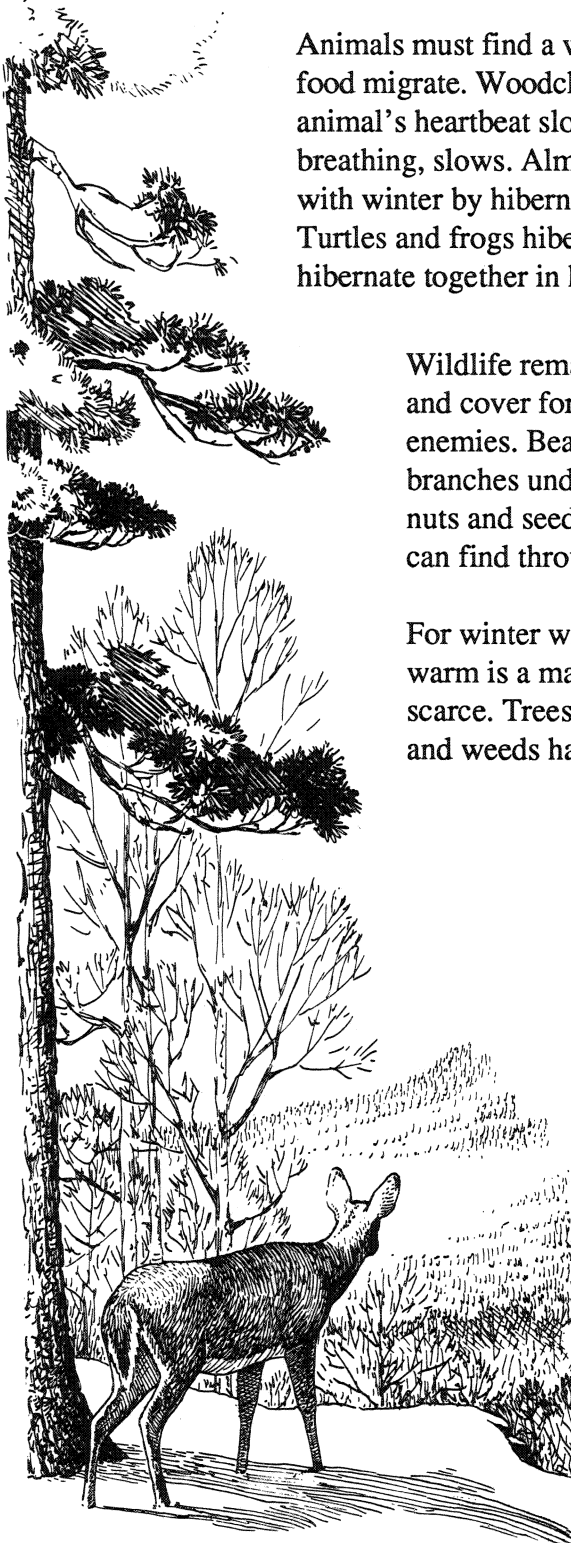
Winter

Winter is a time of struggle. Some plants die, others become dormant. The brilliant leaves of fall have dropped, and forests and fields alike are colored in shades of brown.

Animals must find a way to survive the winter. Birds that can no longer find food migrate. Woodchucks go into hibernation, a deep sleep during which the animal's heartbeat slows down, body temperature drops, and respiration, or breathing, slows. Almost all of Pennsylvania's reptiles and amphibians cope with winter by hibernating. Salamanders hibernate beneath rocks and logs. Turtles and frogs hibernate in stream banks or on pond bottoms. Snakes hibernate together in huge, tangled balls beneath rock piles.

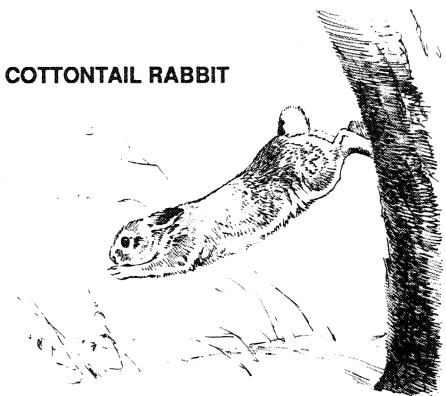
Wildlife remaining active during the winter must be able to find food and cover for protection from cold, snowy weather and hungry enemies. Beavers solve the winter food problem by storing twigs and branches under pond water before it freezes over. Chipmunks store nuts and seeds underground. Others must survive on what food they can find throughout winter.

For winter wildlife, finding a place to hide from enemies and to keep warm is a matter of life or death. Cover, as well as food, may be scarce. Trees and bushes have no leaves, and the tall summer grasses and weeds have disappeared.

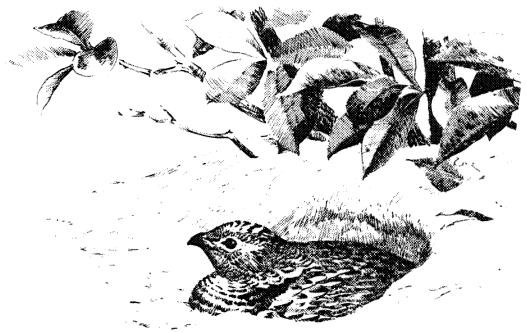


WHITE-TAILED DEER

COTTONTAIL RABBIT



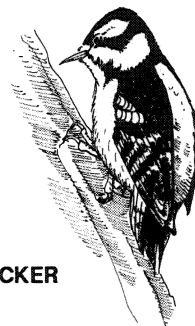
A heavy blanket of snow provides shelter for some animals. Snow acts as insulation, keeping the ground warmer than the air above. Small mammals, like the meadow vole, create runways under the snow and hunt for food there. The ruffed grouse, Pennsylvania's state bird, buries itself beneath the snow to keep warm. Grouse are more likely to survive a harsh winter if there is moderate snow cover.



RUFFED GROUSE

Though many birds leave Pennsylvania for the winter, some choose to stay. The northern cardinal, white-breasted nuthatch, black-capped chickadee, and downy woodpecker are a few of the more common birds you may see. They may have difficulty finding food, and you can help by putting out a bird feeder. Project 3, Feeding Birds in Winter, describes some feeders you can make.

The wildlife detective who ventures out at night may hear other birds wintering in Pennsylvania. In January, the barred owl can often be heard calling, "Who cooks for you? Who cooks for you all?" Winter is mating season for both the barred and the great horned owls, which use their calls to attract mates. These big owls, Pennsylvania's earliest nesting birds, lay their eggs in February.



DOWNY WOODPECKER

One of the first mammals to have young is the black bear. Its cubs are born in January while the mother is still hibernating. Other mammals that breed in the winter are the fox and the skunk. Both breed in February.



BLACK BEAR

RED FOX



SKUNK

Questions About Winter

1. Name three birds that spend the winter in Pennsylvania.

- a. _____
- b. _____
- c. _____



2. What three changes occur in an animal when it hibernates?

- a. _____
- b. _____
- c. _____

3. Where do salamanders hibernate? _____

4. Where do snakes hibernate? _____

5. Name a Pennsylvania mammal that hibernates: _____

6. Why do owls call on cold winter nights? _____

7. What large mammal gives birth to its young while still in hibernation? _____

8. How do beavers solve their winter-food-supply problem? _____

Winter Activities and Projects

Choose at least two of the following winter projects. You may substitute a project that you design on your own as long as you have it approved by your leader. Each of these projects may be completed as a group or individually. For some projects a field guide is suggested. Peterson's Field Guides and the Golden Guide series are available at most public and school libraries.

PROJECT 1. Animal Signs Scavenger Hunt

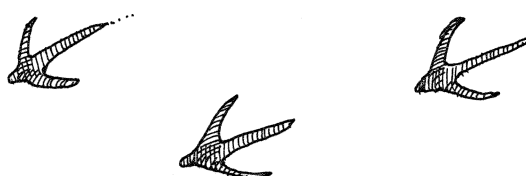
In winter animals leave behind many signs, some of which are listed below. Try to find these items. You will need to use your wildlife detective skills.

1. Tracks of at least four different animals.
2. Five potential food sources and what might eat them.
3. Three signs of animals having eaten.
4. Homes or shelters for at least five different animals.
5. Stop, look, listen. What other signs of animal activity do you notice?

Once you have located all of the above items, complete the observation sheet.



RING-NECKED PHEASANT



WILD TURKEY



WHITE-FOOTED MOUSE



RUFFED GROUSE



GRAY SQUIRREL

Animal Signs Scavenger Hunt—Observation Sheet

1. Where did you look for animal signs? _____

2. List the kinds of animal tracks you found and where you found them.

Tracks	Location
--------	----------

a. _____	_____
----------	-------

b. _____	_____
----------	-------

c. _____	_____
----------	-------

d. _____	_____
----------	-------

3. Choose one of the animals listed and describe what you think it was doing when it made the tracks. _____

4. List below the five food sources and what might eat them.

Food	What eats that?
------	-----------------

a. _____	_____
----------	-------

b. _____	_____
----------	-------

c. _____	_____
----------	-------

d. _____	_____
----------	-------

e. _____	_____
----------	-------

5. Describe three signs of animals having eaten.

a. _____

b. _____

c. _____

continued

Animal Signs Scavenger Hunt—Observation Sheet (continued)

6. Write a description of each shelter or home that you found and the name of an animal that might use it.

a. Description of home:

_____ Animal:

b. Description of home:

_____ Animal:

c. Description of home:

_____ Animal:

d. Description of home:

_____ Animal:

e. Description of home:

_____ Animal:

7. What other signs of animal activity did you notice? _____

PROJECT 2. Tracking in the Snow

This is your chance to be a wildlife detective. Head for a forest, field, or even your own backyard, and look for wildlife tracks in the snow. When you find a set of tracks, follow them. They may lead you to a tree, a burrow, or a hole under your own house. Or they may lead you to an animal's favorite eating place. Try to find and follow as many different tracks as you can. Visit different kinds of habitat. On your observation sheet, keep a record of what you find.



Tracking in the Snow—Observation Sheet

Complete a set of questions for each set of tracks you find.

Type of track: _____

Where did the tracks come from? _____

Where did they lead to? _____

Why would the animal be going there (to eat, to hide, etc.)? _____

continued

Tracking in the Snow—Observation Sheet (continued)

Type of track: _____

Where did the tracks come from? _____

Where did they lead to? _____

Why would the animal be going there (to eat, to hide, etc.)? _____

Type of track: _____

Where did the tracks come from? _____

Where did they lead to? _____

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Type of track: _____

Where did the tracks come from? _____

Where did they lead to? _____

Why would the animal be going there (to eat, to hide, etc.)? _____

PROJECT 3. Feeding Birds in Winter

Feeding birds is the easiest way to get a close look at them. By providing a variety of food, you will be able to see many different kinds of birds. You can buy premixed bird food from the store or mix your own with ingredients found at home.

Below are descriptions of three homemade bird feeders. Choose at least two and try them in your backyard! Or you may use your imagination and create your own feeder. Try to place your feeders near some kind of cover, such as bushes and shrubs. Keep a record of the different birds you see, how many you see, what they eat, etc.

1. Pine cone feeder

Birds you may attract: woodpeckers, nuthatches, chickadees

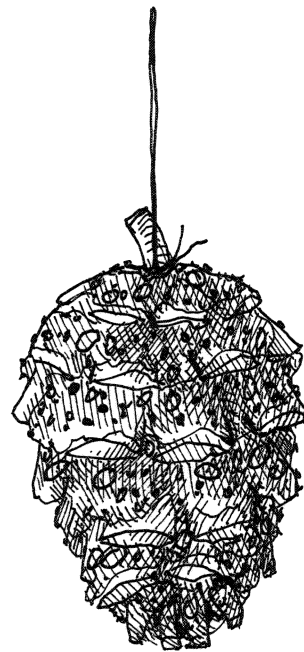
You will need:

- a large, open pine cone
- string or wire
- peanut butter
- a butter knife
- small seeds or oatmeal
- a bowl

To make:

- a. Tie string or wire to base of cone.
- b. Spread peanut butter on cone, partly filling it.
- c. Roll cone in seed or oatmeal. Seeds will stick to the peanut butter and cover the cone.
- d. Hang cone in a tree. If the cone is not big enough to support a perching bird, hang it where birds can reach it using other support.
- e. Refill as needed.

Note: Do not use this type of feeder in hot weather. Peanut butter spoils easily and will make birds sick.



WHITE-BREASTED NUTHATCH

2. Jug feeder

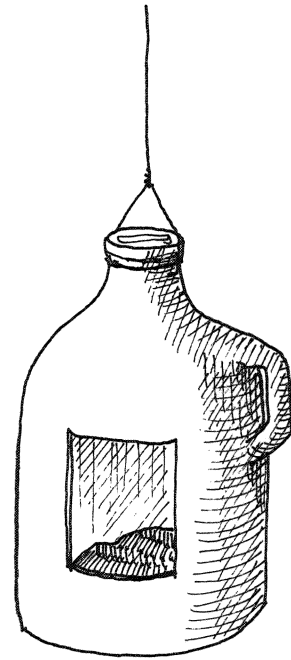
Birds you may attract: chickadees, finches, cardinals, grosbeaks, sparrows, goldfinches

You will need:

- an empty plastic jug, such as a 1-gallon milk jug, with cap
- a marking pen or pencil
- scissors
- glue
- a heavy, flat rock
- bird seed, bread crumbs, or crackers

To make:

- a. Rinse the jug well and allow to dry.
- b. Draw an outline of the door beginning about 2 inches from the bottom of the jug, and extending about 3/4 of the way to the top.
- c. Cut out the door.
- d. Carefully make two holes with the point of the scissors at the top of the jug just below the cap. Thread the string or wire through the holes in the jug. Glue cap into place.
- e. Clean the bottom of the rock. Glue the rock to the inside of the feeder to help prevent the feeder from swaying in the wind.
- f. Fill the feeder with bird seed, bread crumbs, or crackers and hang in a high place.
- g. Refill when empty.



3. Bird food necklace

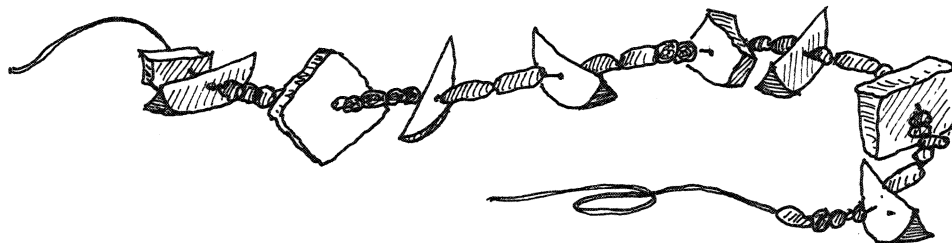
Birds you may attract: blue jays, cedar waxwings, cardinals

You will need:

- a needle and long thread
- any combination of apple slices, suet, raisins, dates, cranberries, stale bread

To make:

- a. Using the needle and thread, string food together.
- b. Hang necklace in trees or shrubs.
- c. Replace when needed.



Water:

No matter which feeder you choose, birds will need water to drink as well as food to eat. If your feeder is not near a stream or pond, you should put water out as well. Use a large, shallow container, like a garbage can lid, for best results. Make sure the water is clean, and replace it when needed. Water may have to be replaced often in the winter because it freezes easily.

Feeding Birds in Winter—Observation Sheet

Daily Record of Birds at My Feeder

Keep a daily record of the birds you observe at your feeders each day for a total of 10 days.

Do not begin your observations until your feeders have been established for at least 2 weeks. Try to watch your feeder at different times of the day.

What kind of feeder(s) did you provide for the birds? _____

Where were the feeders located? _____

Describe the habitat surrounding your feeder (lawns, woods, fields, etc.). _____

Date when food was first placed in feeders: _____

Date	Species of bird	Number seen	Time of day	Temperature

Daily Record of Birds at My Feeder

13

Feeding Birds in Winter—Observation Sheet (continued)

Summarize your daily observations below. For each day, list the different kinds of birds that you observed at your feeder:

[illegible]

Feeding Birds in Winter—Observation Sheet (continued)

Date	Species using the feeder

1. How many different species visited your feeder? _____

2. Which of the species visiting your feeder are present in Pennsylvania all year round?

3. Which of the species visiting your feeder are present in Pennsylvania only in the winter?

4. What was the most abundant species at your feeder? _____

Feeding Birds in Winter—Observation Sheet (continued)

5. Did you observe any birds of the same species fighting (competing) for food? ☐ Yes ☐ No

If so, describe: _____

6. Did you observe any birds of different species fighting (competing) for food? ☐ Yes ☐ No

If so, describe: _____

7. During what time(s) of the day did you see the most birds? _____

8. Did you see more birds during colder weather or during warmer weather? _____

9. Did you observe any mammals, such as squirrels, using your feeder? ☐ Yes ☐ No

If so, describe: _____

Words to Know

Cache—a food supply that an animal hides or stores for later use

Cold-blooded—a word used to describe an animal whose body temperature is the same as its surroundings

Cover—any material (trees, shrubs, and brush piles, for example) that provides protection to animals

Habitat—the physical area where an animal lives

Hibernate—to pass the winter in an inactive sleeping condition

Invertebrate—an animal without a backbone (for example, an insect or a lobster)

Mast—fruits and nuts produced by trees, shrubs, and other woody plants and used by wildlife for food

Migrant—an animal that migrates

Migration—a seasonal movement between a location where an individual or population breeds and a location where it spends the winter

Nocturnal—active at night

Species—a kind of plant or animal

Vertebrate—an animal with a backbone (for example, fish, amphibian, reptile, bird, mammal)

Warm-blooded—a word used to describe an animal whose body temperature remains constant



Figure 1. The effect of the concentration of the solution on the adsorption of the dye. The concentration of the solution was 0.01, 0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 15.0, 20.0, 30.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0, 150.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0, 800.0, 900.0, 1000.0, 1500.0, 2000.0, 3000.0, 4000.0, 5000.0, 6000.0, 7000.0, 8000.0, 9000.0, 10000.0, 15000.0, 20000.0, 30000.0, 40000.0, 50000.0, 60000.0, 70000.0, 80000.0, 90000.0, 100000.0, 150000.0, 200000.0, 300000.0, 400000.0, 500000.0, 600000.0, 700000.0, 800000.0, 900000.0, 1000000.0, 1500000.0, 2000000.0, 3000000.0, 4000000.0, 5000000.0, 6000000.0, 7000000.0, 8000000.0, 9000000.0, 10000000.0, 15000000.0, 20000000.0, 30000000.0, 40000000.0, 50000000.0, 60000000.0, 70000000.0, 80000000.0, 90000000.0, 100000000.0, 150000000.0, 200000000.0, 300000000.0, 400000000.0, 500000000.0, 600000000.0, 700000000.0, 800000000.0, 900000000.0, 1000000000.0, 1500000000.0, 2000000000.0, 3000000000.0, 4000000000.0, 5000000000.0, 6000000000.0, 7000000000.0, 8000000000.0, 9000000000.0, 10000000000.0, 15000000000.0, 20000000000.0, 30000000000.0, 40000000000.0, 50000000000.0, 60000000000.0, 70000000000.0, 80000000000.0, 90000000000.0, 100000000000.0, 150000000000.0, 200000000000.0, 300000000000.0, 400000000000.0, 500000000000.0, 600000000000.0, 700000000000.0, 800000000000.0, 900000000000.0, 1000000000000.0, 1500000000000.0, 2000000000000.0, 3000000000000.0, 4000000000000.0, 5000000000000.0, 6000000000000.0, 7000000000000.0, 8000000000000.0, 9000000000000.0, 10000000000000.0, 15000000000000.0, 20000000000000.0, 30000000000000.0, 40000000000000.0, 50000000000000.0, 60000000000000.0, 70000000000000.0, 80000000000000.0, 90000000000000.0, 100000000000000.0, 150000000000000.0, 200000000000000.0, 300000000000000.0, 400000000000000.0, 500000000000000.0, 600000000000000.0, 700000000000000.0, 800000000000000.0, 900000000000000.0, 1000000000000000.0, 1500000000000000.0, 2000000000000000.0, 3000000000000000.0, 4000000000000000.0, 5000000000000000.0, 6000000000000000.0, 7000000000000000.0, 8000000000000000.0, 9000000000000000.0, 10000000000000000.0, 15000000000000000.0, 20000000000000000.0, 30000000000000000.0, 40000000000000000.0, 50000000000000000.0, 60000000000000000.0, 70000000000000000.0, 80000000000000000.0, 90000000000000000.0, 100000000000000000.0, 150000000000000000.0, 200000000000000000.0, 300000000000000000.0, 400000000000000000.0, 500000000000000000.0, 600000000000000000.0, 700000000000000000.0, 800000000000000000.0, 900000000000000000.0, 1000000000000000000.0, 1500000000000000000.0, 2000000000000000000.0, 3000000000000000000.0, 4000000000000000000.0, 5000000000000000000.0, 6000000000000000000.0, 7000000000000000000.0, 8000000000000000000.0, 9000000000000000000.0, 10000000000000000000.0, 15000000000000000000.0, 20000000000000000000.0, 30000000000000000000.0, 40000000000000000000.0, 50000000000000000000.0, 60000000000000000000.0, 70000000000000000000.0, 80000000000000000000.0, 90000000000000000000.0, 100000000000000000000.0, 150000000000000000000.0, 200000000000000000000.0, 300000000000000000000.0, 400000000000000000000.0, 500000000000000000000.0, 600000000000000000000.0, 700000000000000000000.0, 800000000000000000000.0, 900000000000000000000.0, 1000000000000000000000.0, 1500000000000000000000.0, 2000000000000000000000.0, 3000000000000000000000.0, 4000000000000000000000.0, 5000000000000000000000.0, 6000000000000000000000.0, 7000000000000000000000.0, 8000000000000000000000.0, 9000000000000000000000.0, 10000000000000000000000.0, 15000000000000000000000.0, 20000000000000000000000.0, 30000000000000000000000.0, 40000000000000000000000.0, 50000000000000000000000.0, 60000000000000000000000.0, 70000000000000000000000.0, 80000000000000000000000.0, 90000000000000000000000.0, 100000000000000000000000.0, 150000000000000000000000.0, 200000000000000000000000.0, 300000000000000000000000.0, 400000000000000000000000.0, 500000000000000000000000.0, 600000000000000000000000.0, 700000000000000000000000.0, 800000000000000000000000.0, 900000000000000000000000.0, 10000000

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This image shows a single page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

NOTES



4-H ACTIVITIES REPORT

This report will help you keep a better record of your club activities. Fill it in as you complete each assignment. Refer to this record when you are entering county, state, and national programs. Ask your local leader to explain these programs to you.

My 4-H Activities Report for the 19 Club Year

Projects taken _____	Number of new members you encouraged to join 4-H _____
TV member <input type="checkbox"/> yes <input type="checkbox"/> no	_____
Program title _____	Number of boys and girls you helped with projects _____
Offices held _____	In what way? _____
Club _____	Check those attended and tell how you helped
County _____	<input type="checkbox"/> 3- or 4-day camp _____
“Show-and-tell” given to:	<input type="checkbox"/> 1-day camp _____
Family _____	<input type="checkbox"/> Club or county tours _____
Friends _____	<input type="checkbox"/> Club picnic _____
Local club _____	<input type="checkbox"/> Countywide picnic _____
County _____	<input type="checkbox"/> 4-H Sunday _____
Regional _____	<input type="checkbox"/> County fair _____
State _____	<input type="checkbox"/> Achievement programs _____
News articles _____	<input type="checkbox"/> Roundup _____
Radio _____	<input type="checkbox"/> Teen Leader Retreat _____
TV _____	<input type="checkbox"/> State 4-H Capital Days _____
Things done to improve your health _____	<input type="checkbox"/> Camp Leadership Training _____
Community service or citizenship work done	<input type="checkbox"/> Penn State 4-H Week _____
By myself _____	<input type="checkbox"/> Pennsylvania Farm Show _____
With club _____	<input type="checkbox"/> National 4-H Week _____
Number of meetings your club(s) held this year _____	<input type="checkbox"/> Others _____
Number you attended _____	_____

Name _____

Address _____

Name of Club _____

Leader's Name _____

Name of Project _____

PENNSTATE



College of Agricultural Sciences
Cooperative Extension

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4-H Club Motto

"To make the best better"

4-H Club Pledge

I pledge
my head to clearer thinking,
my heart of greater loyalty,
my hands to larger service, and
my health to better living, for
my club,
my community,
my country, and
my world.

4-H Club Colors

Green and White