

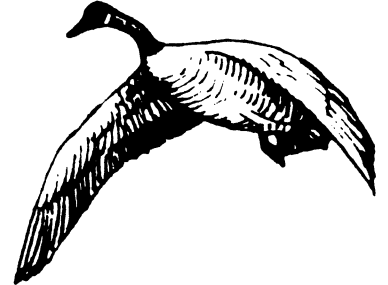
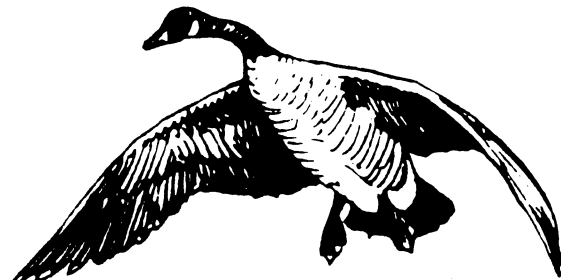
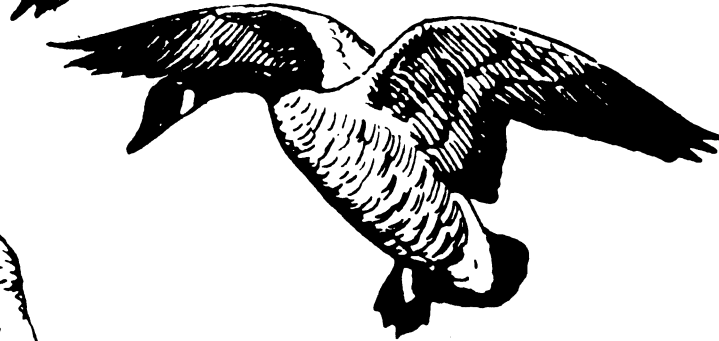
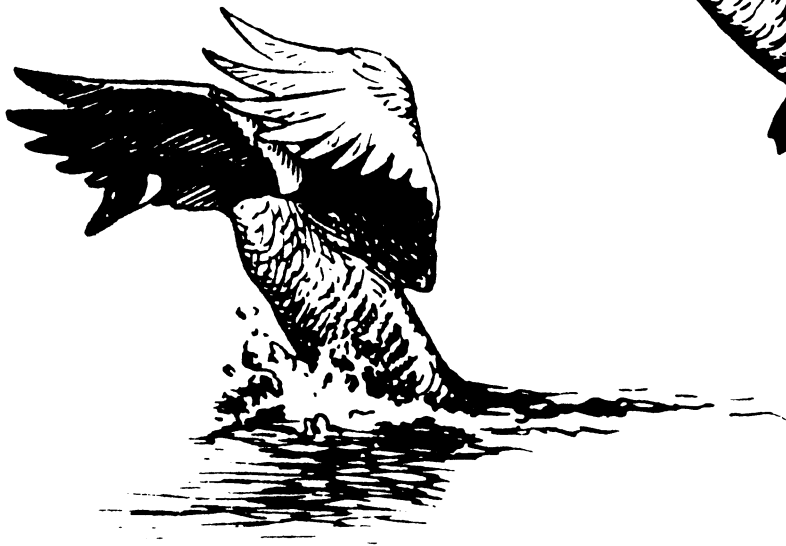


Member's Guide

4-H Wildlife Conservation Program, Unit 1

Wildlife Is All Around Us

BOOK 4. Fall



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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Fall

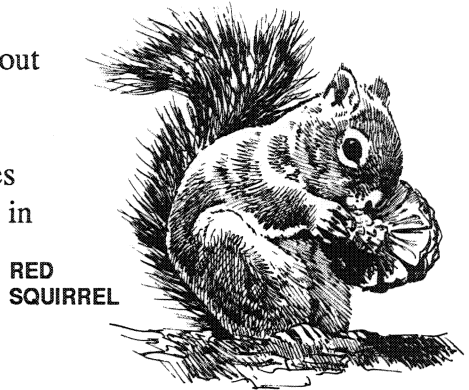
In fall, the season of maturity and activity, most young birds and mammals are just about full-grown, able to feed and care for themselves. Some young animals stay with their families; others go out on their own.

Plants are maturing too. Leaves change from green to brilliant shades of reds, oranges, and yellows. Some of the most beautiful fall colors in the country are found in Pennsylvania, and many people go to the mountains just to enjoy the colors or to gather leaves.

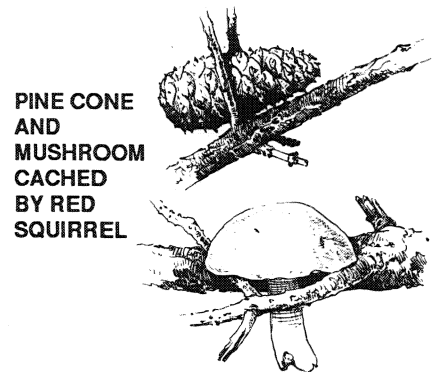
In the fall, nuts and seeds also mature and drop. Nuts and seeds, together called *mast*, replace insects as a major source of food for wildlife. Chipmunks gather acorns, beechnuts, and cherry pits to store, or *cache*, for the winter. Red squirrels collect pine cones (for seeds) and mushrooms and hide them in tree branches. Wild turkeys scratch in leaves on the forest floor, uncovering beechnuts and acorns. Black bears stuff themselves with acorns, apples, grapes, beechnuts, and just about anything else they can find to fatten themselves up for the winter. Almost all animals are storing food and putting on weight in preparation for the cold weather.

But fall activity is not limited to food-gathering. Animals that hibernate, or spend the winter sleeping, must prepare their dens. Groundhogs, for example, line their dens with dried leaves and grasses. Other animals prepare their winter shelters. Gray squirrels line tree cavities with leaves, and muskrats build huts of mud and weeds.

White-tailed deer are busy as well, getting ready for the breeding season. By now the bucks have rubbed and polished the velvet from their antlers. On small trees they create "buck rubs," areas stripped of bark. With pointed antlers and swollen necks, the angry bucks fight for territory, or space, and the does within that territory. Each buck marks his territory by making a scrape on the ground. He scrapes away leaves and places his hoofprint in the center. If you see buck rubs and scrapes during a walk in the woods, they are sure signs of a buck nearby.



RED
SQUIRREL



PINE CONE
AND
MUSHROOM
CACHED
BY RED
SQUIRREL



TURKEY SCRATCHING



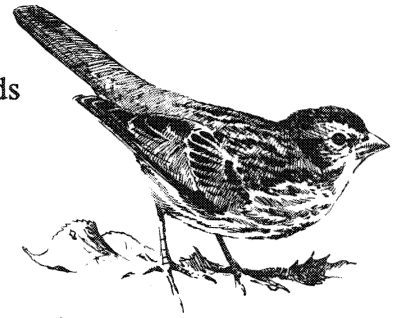
WHITE-TAILED
BUCK



BUCK PAWING

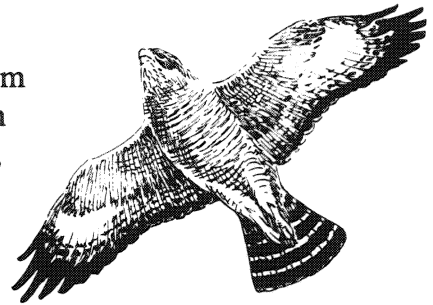
In the fall, migrating birds begin to move south for the winter. Songbirds leave quietly, without singing as they do on arriving in spring. Many birds leave unnoticed during the night. On a clear night in late September or October, the wildlife detective can see the moonlit shadows of songbirds passing through the sky.

Unlike songbirds, waterfowl migrate through Pennsylvania in large, sometimes noisy, flocks. Geese, once again, can be seen flying overhead in V-shaped flocks. Ducks and loons come to rest on lakes and rivers.



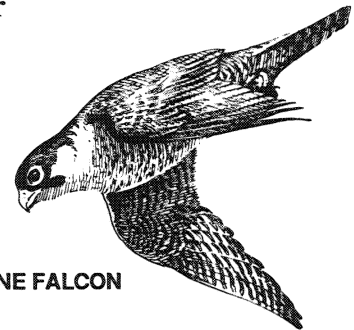
FOX SPARROW

But perhaps the most impressive fall migration is that of hawks. From September through November, hawks from Canada and the northern United States pass through Pennsylvania on their way south. In fact, the best place in the country to view migrating hawks is right here in our state. On Hawk Mountain, in eastern Pennsylvania, you may see thousands of hawks in one day!



RED-SHOULDERED HAWK

Some insects migrate in the fall too. The monarch butterfly and the green darner dragonfly are two examples. Many insects die when cold weather sets in, leaving behind thousands of eggs that will hatch in late spring or summer. Others, like the honeybee, remain active all winter. Inside their hives the bees form a living ball. Each bee moves constantly from the inside of the ball to the outside. In this way no individual is exposed to the cold for a long time. A different approach is taken by the queen bumblebee—she hibernates underground.



PEREGRINE FALCON

Cold-blooded animals are slowing down in the fall. When nights are cool and days are warm, snakes emerge in daytime, searching for warmth. You may see snakes of all kinds stretched out on back roads, wood piles, stone piles, or other sunlit spots. Fall is a good time to see baby snakes, born in August or September, out enjoying the sun. The eastern garter snake, northern red-bellied snake, and northern ring-necked snake are just a few of the harmless snakes you may see in Pennsylvania.



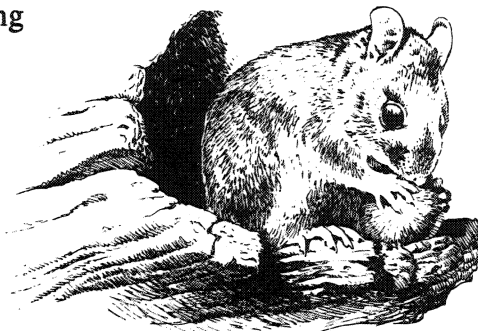
RING-NECKED SNAKE



RED-BELLIED SNAKE

Eventually, as the weather gets colder, the snakes return to their dens to breed again before going into hibernation. Turtles, too, attempt to mate before hibernating.

**WHITE-FOOTED
MOUSE**



Questions About Fall

1. What is mast? _____

2. Name three animals that feed on mast.

a. _____ b. _____ c. _____

3. What does it mean to cache food for the winter? _____

4. In what other ways do wild animals prepare for the winter?

5. Take a walk through a woodlot or forest. Did you notice any clues left by deer (buck rubs, scrapes, etc.)?

6. When do hawks migrate through Pennsylvania? _____

7. What other large birds migrate through Pennsylvania? _____

8. Name three ways insects cope with cold weather.

a. _____

b. _____

c. _____

9. What sign do wild turkeys leave when feeding?

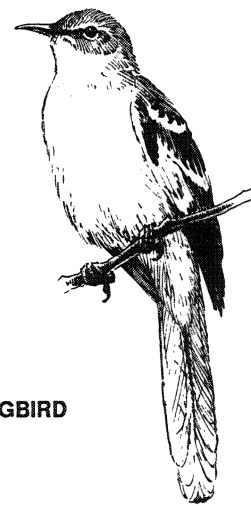
Fall Activities and Projects

Choose at least two of the following fall 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.

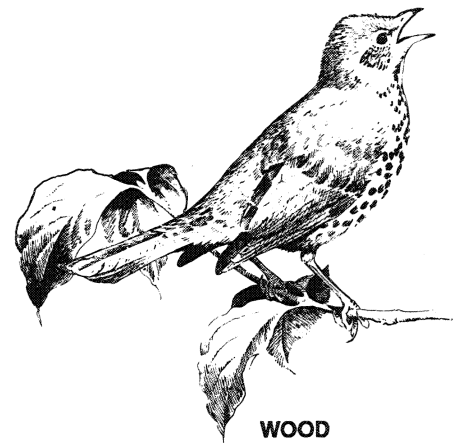
PROJECT 1. Why Migrate?

A bird's food requirements determine whether or not the bird must migrate. If a bird cannot find the food it eats, it must travel to a place where that food is available. For each food listed below, imagine that you are a bird which eats this particular food. Determine whether or not the food is available in winter and whether or not you will have to migrate.

Food	Available in winter (yes or no)		Will you migrate? (yes or no)	
Mosquitoes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Berries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fish in small ponds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Squirrels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Caterpillars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Frogs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nectar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fish in streams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Snakes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rabbits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grasshoppers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insects under bark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



MOCKINGBIRD



WOOD
THRUSH

Why Migrate?—Observation Sheet

Take a walk outside. Locate three birds that migrate during the fall and spend the winter south of Pennsylvania. Then, for each bird, answer the following questions.

1. What was the ***first*** bird you saw? _____

2. What type of food does it typically eat? _____

3. Is this type of food available in Pennsylvania during the winter? _____

4. Where does the bird you saw spend the winter? _____

5. What type of food does it eat during the winter? _____

1. What was the ***second*** bird you saw? _____

2. What type of food does it typically eat? _____

3. Is this type of food available in Pennsylvania during the winter? _____

4. Where does the bird you saw spend the winter? _____

5. What type of food does it eat during the winter? _____

1. What was the ***third*** bird you saw? _____

2. What type of food does it typically eat? _____

3. Is this type of food available in Pennsylvania during the winter? _____

4. Where does the bird you saw spend the winter? _____

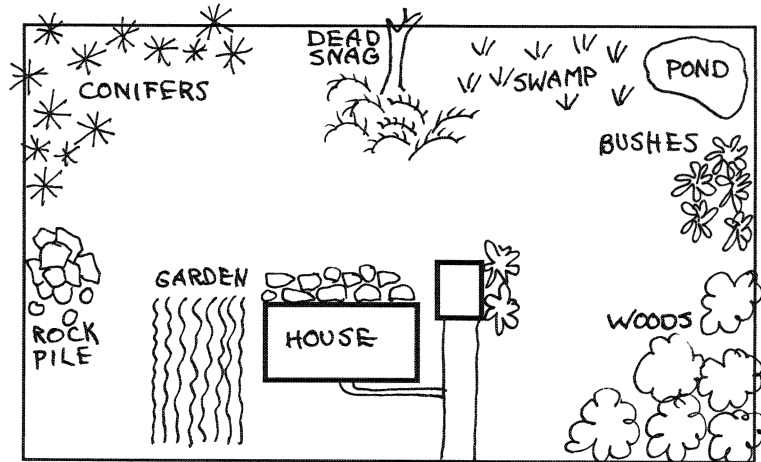
5. What type of food does it eat during the winter? _____

PROJECT 2. Providing Shelter for Wildlife

Choose your backyard or another area. What types of cover are available to wildlife? Make a map of the different types of cover as they appear in the area you have selected.

Examples of cover include:

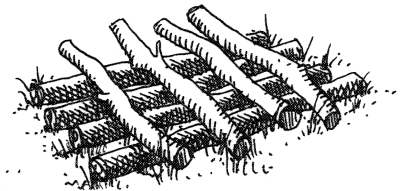
- conifers
- snags (dead trees)
- shrubs
- brambles (raspberry and blackberry bushes)
- birdhouse
- brush pile
- tall grass or weeds
- buildings
- rock walls



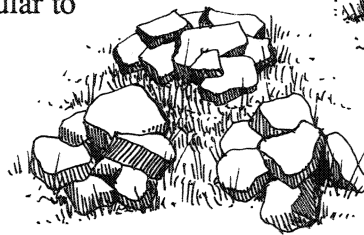
Once you have made your map, you may want to improve the cover in that area. You could build a brush pile, put up a birdhouse, or plant a tree. Make sure you get permission from your parents before changing anything in your yard. Instructions on how to build birdhouses can be found in the Pennsylvania Game Commission book *Woodworking for Wildlife*. Your 4-H leader can help you find this book.

Brush piles may be used for cover by birds, mice, moles, shrews, chipmunks, weasels, and rabbits. To build a brush pile you need to make a base. Three types of bases can be used for building a brush pile:

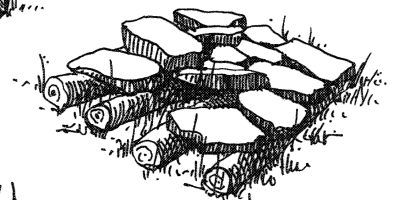
1. The first type of base is made of logs. Place four large logs about 1 foot apart and parallel to each other. Then place four more logs of the same size perpendicular to the first logs.



2. The second type of base is made from stones. Place three piles of large stones in a triangular pattern.



3. The third type of base is made from logs and stones. Place four large logs about 1 foot apart and parallel to each other. Then place large, flat rocks across the top of these.



After you have built the base of the brush pile, add the brush. Start with larger limbs first, then add smaller pieces. The pile should be about 6 feet high and 6 feet wide.



Map of My Area

Describe the area you chose: _____

Draw your map below:

Providing Shelter for Wildlife—Observation Sheet

List the animals you saw in the area you mapped. What animals were using what types of cover? Were the animals using the cover for feeding, hiding, or a place to sleep at night?

[illegible]

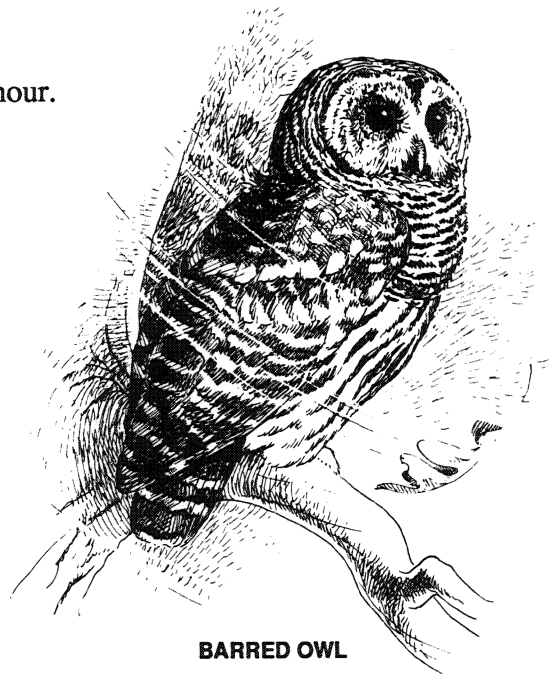
Project 3. Hawk and Owl Pellets

Hawks and owls regurgitate materials such as bone, feathers, and fur which they cannot digest. The regurgitated materials appear as gray lumps, or "pellets." Owl pellets can be found under pine or spruce trees in the woods. Hawk pellets can usually be found in open areas under nest sites or trees where hawks sit, or roost. By dissecting the pellets, you can discover what these birds of prey have been eating.

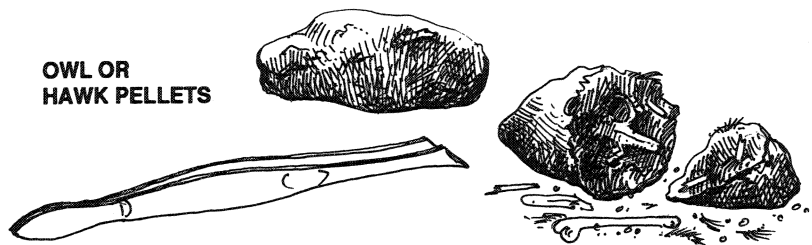
The first step is to locate an owl or hawk pellet. Start by searching in the forest under conifer trees. Perhaps you have seen a hawk roosting in a treeline along a field. Try searching under trees where you have seen a hawk sitting.

Once you have found a pellet, you can dissect it to discover what the bird has eaten. Follow the instructions below:

1. Soak the pellet in warm water with detergent for about an hour.
2. Pick the pellet apart with tweezers and a needle. You may want to do this on newspaper or cardboard to avoid making too much of a mess.
3. Separate the pellet into piles of bone, fur, and feathers.
4. Now try to identify what the bird has eaten. It may be another bird, a meadow vole, a mouse, or a shrew. Birds can be identified by their hollow bones and feathers. To identify skulls, use Peterson's *Field Guide to Mammals*.



BARRED OWL



OWL OR
HAWK PELLETS

Hawk and Owl Pellets—Observation Sheet

1. Where did you find the pellet? _____

2. Is it a hawk pellet or an owl pellet? (Hawk pellets are looser than owl pellets.) _____

3. Do you know what kind of hawk or owl the pellet came from? (Look for hawks and owls in the area where you found the pellet.)

4. List the items found in the pellet. _____

5. Has the bird eaten a mammal (fur, solid bones) or another bird (feathers, hollow bones)?

6. Can you identify what kind of bird or mammal was eaten? _____

1. Where did you find the pellet? _____

2. Is it a hawk pellet or an owl pellet? (Hawk pellets are looser than owl pellets.) _____

3. Do you know what kind of hawk or owl the pellet came from? (Look for hawks and owls in the area where you found the pellet.)

4. List the items found in the pellet. _____

5. Has the bird eaten a mammal (fur, solid bones) or another bird (feathers, hollow bones)?

6. Can you identify what kind of bird or mammal was eaten? _____

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

Conifer—a tree, such as pine and hemlock, that stays green all year

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

Snag—a dead tree. Snags benefit animals because cavities form in them, providing holes for birds and mammals to hide or nest in.

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



CANADA GOOSE



STAGHORN SUMAC



RED FOX

Final Report • Wildlife Is All Around Us • *Fall*

1. What projects did you complete? _____

2. For each project write a story about what you did and what you learned. Did you have fun doing this project? What was the best part? What was the worst part?

3. Did you go on any field trips? Where did you go? What did you see?

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 _____

TV member ☐ yes ☐ no

Program title _____

Offices held

Club _____

County _____

“Show-and-tell” given to:

Family _____

Friends _____

Local club _____

County _____

Regional _____

State _____

News articles _____

Radio _____

TV _____

Things done to improve your health

Community service or citizenship work done

By myself _____

With club _____

Number of meetings your club(s) held this year _____

Number you attended _____

Number of new members you encouraged to join 4-H

Number of boys and girls you helped with projects

In what way? _____

Check those attended and tell how you helped

☐ 3- or 4-day camp _____

☐ 1-day camp _____

☐ Club or county tours _____

☐ Club picnic _____

☐ Countywide picnic _____

☐ 4-H Sunday _____

☐ County fair _____

☐ Achievement programs _____

☐ Roundup _____

☐ Teen Leader Retreat _____

☐ State 4-H Capital Days _____

☐ Camp Leadership Training _____

☐ Penn State 4-H Week _____

☐ Pennsylvania Farm Show _____

☐ National 4-H Week _____

☐ Others _____

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