

4-H Natural Science Projects and Materials

DOCUMENT
COLLECTION
OREGON
COLLECTION

Outdoorsman
Bee
Entomology

Forestry
Geology
Marine Science
Archery

Fishing
Gun Safety
Wild Animals and Birds

Members' project manuals are listed in **boldface type**; leaders' guides in *italics*.

All Natural Science members may use the My 4-H Project Record, 038R.

Natural Science projects are those relating to the study of the earth and the animals and plants that (with energy from the sun) are our natural resources. They relate to the Ecology and Conservation of Our Environment.

Natural Science or "Outdoor" clubs may include members enrolled in a variety of these projects. If the clubs are large, assistant or junior leaders will be needed to assist in the various areas.

The OSU Extension Service in cooperation with the Oregon Department of Fish and Wildlife and the National Wildlife Federation offers a **Backyard Wildlife Program**. Members and their families plan and plant their yards to attract and provide homes for wildlife. Plans include window boxes, feeders and bird houses for apartment dwellers and major plantings with optional ponds for suburb and rural areas. Can be a club or individual activity. Leaders are encouraged to order a kit of materials.

General Natural Science publications, available as needed:

- 3681 *Backyard Wildlife Program kit*
- PNW 77 4-H Outdoorsman—outdoor manual
- 3001 Pocket Guide for 4-H Hikes—one per member
- 4002 4-H Mounting Card—for pressed plants
- 3004L *Guidelines For 4-H Nature Hikes—L.G.*
- 2101L *Know Your Crops & Weeds—L.G.*

4-H Outdoorsman

Boys and girls go on hikes and field trips to fields, forests, ponds, streams, seashores, mountains, roadsides and backyards to observe and learn how plants and animals live. The project combines biology, entomology, forestry, and geology—the study of animals and plants in their natural habitat—ecology. It is recommended for 9- to 12-year-old boys and girls who wish to start with a general outdoor project. After one or two years, they may wish to enroll in a more specific project, or they may continue as 4-H Outdoorsmen.

4-H Outdoorsmen:

- Enjoy—hikes, camping, and the out-of-doors.
- Learn—about animals, plants, and the earth.
- Share—nature and its beauty.
- Improve—knowledge, health, and physical fitness.

- 300 4-H Outdoorsman Project—project outline
- PNW 77 4-H Outdoorsman—outdoor manual

Bee

The 4-H Bee project offers two options: 4-H members may learn about bees by owning and caring for a hive of bees or by reading about bees and observing their habits. Boys and girls who are very sensitive to bee stings should not attempt to care for a hive. Both options include basic requirements for a bee advancement program. 4-H members learn about bees and how to care for them, the social life of bees, the honey-producing plants in their area, how bees pollinate crops and increase the yield of many fruit and seed crops, and how honey is produced and marketed.

- 410 Oregon 4-H Bee Project
- PNW 79 Beekeeping

Entomology

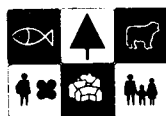
The 4-H Entomology project provides opportunities for members to learn about insects and their value, to go on field trips, to collect and identify insects, and to learn how to control harmful insects.

- 3220 Oregon 4-H Entomology Project
- 3221 4-H Entomology Project (Manual)
- 3220R 4-H Entomology Record
- 3221L *Handbook of the Insect World, leaders only*
- Mounting pins (packs of 100 for 5 members)

Forestry

Forestry offers boys and girls an opportunity to get better acquainted with Oregon's number one industry and natural resources. Members take hikes in the woods; learn how trees grow and how to identify them; and collect, press, and mount specimens of forest plants. They learn about animals, birds, and insects that live in the woods and the many uses of our forests. Activities include: hikes, field trips, and forestry camps.

- PNW 92 4-H Forestry Project
- 331L *Forestry Leaders Guide*
- 331LS *Forestry Leaders Guide, Supplement*



OREGON STATE UNIVERSITY
**EXTENSION
SERVICE**

Extension Service, Oregon State University, Corvallis, Henry A. Wadsworth, director. This publication was produced and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Extension work is a cooperative program of Oregon State University, the U. S. Department of Agriculture, and Oregon counties. Extension invites participation in its programs and offers them equally to all people, without discrimination.

Supplemental Materials

- 4002 4-H Mounting Cards
EB 697 Trees to Know in Oregon—50¢ (free to leaders)
EB 785 Ferns to Know in Oregon
Range Plants Leaflets (up to six single copies free; set of 77, \$2.50)
EC 566 Oregon Tree Quiz
EC 553 Western Oregon Shrub Quiz, or
EC 615 Eastern Oregon Shrub Quiz
EC 567 *Oregon Tree Quiz Key*
EC 554 *Western Oregon Shrub Quiz Key*
EC 616 *Eastern Oregon Shrub Quiz Key*

4-H Tree Farmer

This project is for older boys and girls who will manage an area of forest land, a woodlot, Christmas tree planting, windbreak, or a forestry nursery. An excellent manual and a special record are provided.

- 15 **The 4-H Tree Farmer**
16 4-H Tree Farmer Record

Geology

Geology is the science of the earth. It includes the study of rocks, minerals, land forms, and the fossils of ancient animals and plants. Much of the story of the earth is recorded in its rocks.

4-H geologists go on hikes and field trips to study land forms and the rocks, minerals, and gem stones they find. They learn about animals, plants, soil, and weather and how they relate to each other.

The project has annual requirements and an advancement program that stimulates interest in learning more about geology and natural science. 4-H geologists collect and identify rocks and minerals, prepare exhibits and displays, and participate in rock and mineral identification contests.

- 340 **4-H Geology**
3401L *Description of Some Oregon Rocks and Minerals, for leaders*

Members may wish to purchase one or more paperback books on geology.

Marine Science

This pilot project was introduced in a few counties the spring of 1972. It was prepared by Marine Science Center Staff and is a cooperative program of the Oregon State University Sea Grant and Extension Service. It is being tested in Oregon, Washington, and California.

Marine science includes the study of the ocean, its shores and bays, and the plant and animal life found in and around it. One or more field trips to the coast are essential.

- 3501 **4-H Marine Science—Ocean Adventures**
EC 72J Enjoy the Beaches in Safety
Synopsis of Regulations for Taking Shellfish, etc.
3501L *4-H Marine Science Leaders' Guide—Ocean Adventure*
EB 5 *A Guide to Oregon's Rocky Intertidal Areas**
3502 **Advanced Marine Science**
3502L *Advanced Marine Science Leaders' Guide*
SG 5 *Land Slides of Oregon: North Coast*
SG 8 *Continental Shelf Sediments Off Oregon*

* Leaders may order single copies from the Oregon Department of Fish & Wildlife, 1400 SW 5th, Portland 97201

Supplemental Materials:

- FS 21 Home Canning of Tuna and Salmon
SG 7 Home Freezing of Seafood
FS 152 Preparing Cluster Egg Baits
FS 170 A Guide to Buying Oregon Fish and Shellfish
FS 183 Cutting and Freezing Salmon and Steelhead
3632 How to Catch Fish in Salt Water

Archery

4-H Archers learn how to select, care for, and use a bow and arrows; how to shoot safely and accurately; and about wildlife and the out-of-doors.

- 361 **Oregon 4-H Archery**
3612 NRA Bow Hunting Handbook
361L *4-H Archery Leaders' Guide*
3611 *Oregon 4-H Archery Mail-In Tournament, leaders only*

4-H Fisherman

"Quit wishing—go fishing." 4-H fishermen learn how fish live and grow and how to catch them. This project has many options that will provide a variety of experience over a period of several years. Members learn about underwater insects that fish eat and about conditions necessary for reproduction and growth.

- 520 **The 4-H Fisherman**
520L *The 4-H Fisherman: Leaders' Guide*

Supplemental Materials:

- 3631 How to Catch Fish in Fresh Water
3632 How to Catch Fish in Salt Water
FS 56 Catching and Cooking Crayfish
FS 140 Care and Culture of Earthworms
FS 152 Preparing Cluster Egg Baits From Salmon and Steelhead Roe
FS 183 Cutting and Freezing Salmon and Steelhead at Home
EB 790 *Game Foods*

Gun Safety

For boys and girls 11 and older. Provides opportunity to develop safe habits with firearms, improve shooting skill, and learn about wildlife conservation. A five-step gun safety advancement program is provided. Clubs arrange with the Oregon Department of Fish and Wildlife to get materials for the Hunter Safety Course.

- 366 **4-H Gun Safety**

Wild Animals and Birds

Members go on hikes to observe and learn about wild animals and birds and how they live. They make friends with animals and birds and learn their names and how to recognize them. They practice good outdoor manners and sportsmanship. Many interesting books and stories are available. Members learn about the relationship between the woods, water, soil, and wildlife. Only one division is available; it can be continued for several years by doing different electives and improving outdoor skills.

- 368 **Wild Birds and Animals**

Other wildlife materials:

- EB 804 Mole and Gopher Control