

West Virginia Guide to 4-H Projects



SPECIAL NOTES:



Beginner, Intermediate, and Advanced indicate the degree of difficulty and the approximate age levels (9-12, 13-15, and 16-21, respectively). A project exhibit consists of the completed project booklet, project exhibit, and activity record.

ANIMAL SCIENCE



Veterinary Science (*Advanced*)

This highly challenging three-project series explores the exciting world of veterinary science. These are excellent advanced projects to supplement the other animal projects. You must have access to an animal to make observations needed for completing certain units. In *The Normal Animal* (Vet Science 1), you will learn to how to take an animal's temperature and pulse, how to recognize healthy skin and membranes, and how to clean and disinfect animals' quarters. In *Animal Disease* (Vet Science 2), you will study bacteria, viruses, and parasites; learn about diseases' relationship to nutrition, stress, heredity, and poison; and learn basic disease prevention techniques. *Animal Health and its Relationship to Our World* (Vet Science 3) involves studying environmental influences on animal health, learning about maintaining animal health, and exploring veterinary medicine as a career.

Beef (*Any Age*)

Each booklet contains activities for three years. Complete seven beef achievement program activities each year; complete each level within three years; and participate in the required number of project learning experiences each year. If enrolled with an animal, you will need to select the *4-H Beef Heifer/Cow, Feeder Calf, or Market Steer Record Guide* to accompany this project. If enrolled without an animal, check with your Extension agent for approval. It is suggested that you consult with your Extension agent about using the Self-Determined project, with the beef curriculum as a resource. In *Bite Into Beef* (Beef 1), you will identify breeds, locate beef parts, judge, halter break a calf, fit a steer, show a calf, recognize a healthy animal, select feed ingredients, and shop for beef and beef by-products. *Here's the Beef* (Beef 2) provides challenging activities related to leg structure, oral reasons, feed ingredients, behavior, nose printing, parasites, fitting, ethical issues, beef carcass composition, and retail meat cuts. *Leading the Charge* (Beef 3) encourages more in-depth learning about selection and judging, feeding, careers, health and reproduction, and meats and marketing.

Dairy Cattle (*Any Age*)

Each booklet contains activities for three years. Complete seven dairy achievement program activities each year; complete each level within three years; and participate in the required number of project learning experiences each year. If enrolled with an animal, you will need to select the *4-H Dairy Record Guide* to accompany this project. If enrolled without an animal, check with your Extension agent for approval. It is suggested that you consult with your Extension agent about using the

Self-Determined project, with the dairy curriculum as a resource. *Cowabunga!* (Dairy 1) explores breeds, selecting calves, body parts, desirable traits, packing a show box, grooming and showing a calf, and identifying stages of calving and care. *Mooving Ahead* (Dairy 2) features judging, identifying, ethical decision-making, keeping animals healthy, parasites, behavior, housing, hay quality, milking, food safety, and careers. In *Rising to the Top* (Dairy 3), you will practice body condition scoring, select through records, detect mastitis, balance a ration, detect pregnancy, deliver a calf, promote dairy products, and explore career opportunities.

Horse (*Any Age*)

Each booklet contains activities for three years. Complete seven horse achievement program activities each year; complete each level within three years; and participate in the required number of project learning experiences each year. If enrolled with an animal, you will need to select the *4-H Horse Record Guide* to accompany this project. If enrolled without an animal, check with your Extension agent for approval. It is suggested that you consult with your Extension agent about using the Self-Determined project, with the horse curriculum as a resource. *Giddy Up and Go* (Horse 1) covers horse behavior, terms, breed identification, body parts, selection, grooming, saddling and bridling, and safety and equipment. In *Head, Heart and Hooves* (Horse 2), you learn more about acquiring and raising a horse, nutrition and care, teeth and bones, and judging, including giving oral reasons. *Stable Relationships* (Horse 3) has you exploring horse reproduction, diseases and health care, pasture management, providing appropriate shelter, and building a financial plan. In *Riding the Range* (Horse 4), you'll learn nine basic riding skills and ten horsemanship skills, training techniques, trail riding and selection, and use of tack. *Jumping to New Heights* (Horse 5) has you learning more advanced riding skills, the Quarter System, horse showmanship, ethics, and leadership.

Sheep (*Any Age*)

Each booklet contains activities for three years. Complete seven sheep achievement program activities each year; complete each level within three years; and participate in the required number of project learning experiences each year. If enrolled with an animal, you will need to select the *4-H Breeding Sheep or 4-H Market Lamb Record Guide* to accompany this project. If enrolled without an animal, check with your Extension agent for approval. It is suggested that you consult with your Extension agent about using the Self-Determined project, with the sheep curriculum as a resource. *Lambs, Rams, and You* (Sheep 1) introduces you to a wide variety of fun and challenging activities including identifying parts, selecting a project lamb, preparing for lambing, identifying lamb cuts, feeding, and showing a sheep. In *Shear Delight* (Sheep 2), you will practice presenting oral reasons, determine yield grades, compare digestive systems, explore a feed tag, practice management skills, deliver a lamb, treat parasites, and discuss ethical decision-making.

Leading the Flock (Sheep 3) features activities related to judging, budgeting, Web surfing, understanding reproduction and genetics, surveying consumers, exploring careers, marketing products, and teaching others.

Swine (Any Age)

Each booklet contains activities for three years. Complete seven swine achievement program activities each year; complete each level within three years; and participate in the required number of project learning experiences each year. If enrolled with an animal, you will need to select the *4-H Swine Record Guide* to accompany this project. If enrolled without an animal, check with your Extension agent for approval. It is suggested that you consult with your Extension agent about using the Self-Determined project, with the swine curriculum as a resource. **The Incredible Pig** (Swine 1) introduces you to naming breeds, learning swine body parts, judging market hogs, exploring a digestive system, examining a healthy pig, identifying pork cuts, and practicing fitting and showing.

Putting the Oink in Pig (Swine 2) includes managing baby pigs, balancing a ration, exploring swine diseases, preparing pork, discovering swine careers, and packing a show box. In **Going Whole Hog** (Swine 3), you will plan a breeding system, judge breeding gilts, design a swine operation, and complete a job application.

Poultry (Any Age)

Each booklet contains activities for three years. Complete seven poultry achievement program activities each year; complete each level within three years; and participate in the required number of project learning experiences each year. If enrolled with an animal, you will need to select the *4-H Poultry Record Guide* to accompany this project. If enrolled without an animal, check with your Extension agent for approval. It is suggested that you consult with your Extension agent about using the Self-Determined project, with the poultry curriculum as a resource. Topics in **Scratching the Surface** (Poultry 1) include identifying parts, species and breeds, selection, exploring an egg, cooking eggs, features of feathers, feeding, handling, washing, and showing. **Testing Your Wings** (Poultry 2) has you making a budget, determining pecking order, identifying bones, grading carcasses, selecting layers using the *Standard of Perfection*, examining an egg, and keeping poultry healthy. In **Flocking Together** (Poultry 3), you will develop leadership skills by planning a judging clinic, managing a flock, exploring careers, processing chickens, conducting poultry games, and discussing values and ethics.

Dog (Any Age)

Each booklet contains activities for three years. Complete seven dog achievement program activities each year; complete each level within three years; and participate in the required number of project learning experiences each year. If enrolled with an animal, you will need to select the *4-H Dog Record Guide* to accompany this project. If enrolled without an animal, check with your Extension agent for approval. It is suggested that you consult with your Extension agent about using the Self-Determined project, with the dog curriculum as a resource. The activities in **Wiggles and Wags** (Dog 1) relate to body parts, selection, correcting behavior, housebreaking a puppy, body language, controlling fleas, health care, grooming, and training

a dog to respond to seven basic commands. **Canine Connection** (Dog 2) explores dog Web resources; breed origins; health, safety, feeding, and parasite control; locating a missing dog; socialization; showmanship; and tricks. In **Leading the Pack** (Dog 3), you will share knowledge and skills as you learn how to plan and conduct a dog show, a showmanship clinic, a puppy training class, and a skillathon as well as research zoonosis diseases, administer emergency first aid, explore dog laws and dog careers, and teach others about dogs.

Rabbit (Any Age)

Each booklet contains activities for three years. Complete seven rabbit achievement program activities each year; complete each level within three years; and participate in the required number of project learning experiences each year; and increase your rabbit knowledge and skills. If enrolled with an animal, you will need to select the *4-H Market Rabbit Record Guide* to accompany this project. If enrolled without an animal, check with your Extension agent for approval. It is suggested that you consult with your Extension agent about using the Self-Determined project, with the rabbit curriculum as a resource. **What's Hoppening** (Rabbit 1) covers identifying breeds, handling and showing rabbits, identifying rabbit parts and equipment, recognizing a healthy rabbit, reading a pedigree, and kindling a litter. In **Making Tracks** (Rabbit 2) you will learn to recognize body types, judge and show rabbits, tattoo a rabbit, keep records, identify diseases, administer medication, record growth rates, and market products. In **All Ears** (Rabbit 3) you will develop a breeding program, design a rabbitry, cull based on production, prevent diseases, develop sportsmanship, and develop a marketing plan.

Dairy Goat (Any Age)

Each booklet contains activities for three years. Complete seven dairy goat achievement program activities each year; complete each level within three years; and participate in the required number of project learning experiences each year. If enrolled with an animal, you will need to select the *4-H Goat Record Guide* to accompany this project. If enrolled without an animal, check with your Extension agent for approval. It is suggested that you consult with your Extension agent about using the Self-Determined project, with the dairy goat curriculum as a resource. **Getting Your Goat** (Dairy Goat 1) focuses on selection, body parts, breeds, management, records, safety, disease prevention, feed ingredients, products, grooming, and showmanship. **Stepping Out** (Dairy Goat 2) continues with activities and information on exhibiting, judging dairy goats, giving oral reasons, delivering a kid dairy goat, caring for a newborn, performing dairy goat management practices, recognizing health problems and diseases, and determining hay quality. In **Showing the Way** (Dairy Goat 3), you will plan a judging contest, evaluate a dairy goat heard, select a breeding system, determine body condition scores, develop a herd calendar, formulate a ration, and develop a commercial.

Meat Goat (Any Age)

Each booklet contains activities for three years. Complete seven meat goat achievement program activities each year; complete each level within three years; and participate in the required number of project learning experiences each year. If enrolled with an animal, you will need to select the *4-H Goat Record Guide* to accompany this project. If enrolled without an animal,



check with your Extension agent for approval. It is suggested that you consult with your Extension agent about using the Self-Determined project, with the meat goat curriculum as a resource. **Just Browsing** (Meat Goat 1) explores meat goat body parts, meat goat selection, breeds, record keeping, meat goat and dairy conformation, show preparations, sportsmanship, meat goat health, feed selection, and several management skills. In **Get Growing with Meat Goats** (Meat Goat 2), you will explore meat goat diseases, selecting stock, poisonous plants, body condition, water quality, goat predators, kidding, meat goat reproduction, and showing meat goats. In **Meating the Future** (Meat Goat 3), you discover how to select breeding sires, balance a ration, prevent diseases, control internal and external parasites, practice biosecurity, practice sound ethics, conduct a meat goat judging clinic, judge goats, give oral reasons, and explore meat goat products.

Pets (Any Age)

Each booklet contains activities for three years. Complete seven pets achievement program activities each year; complete each level within three years; and participate in the required number of project learning experiences each year. If enrolled with an animal, you will need to select the *4-H Pets Record Guide* to accompany this project. If enrolled without an animal, check with your Extension agent for approval. It is suggested that you consult with your Extension agent about using the Self-Determined project, with the pets curriculum as a resource. **Pets Pals** (Pets 1) explores pet selection, body part identification, pet art, pet communication, handling, housing, and daily needs. In **Scurrying Ahead** (Pets 2), you will develop planning and decision-making skills as you debate pet topics, create a story, observe pet behavior, promote a product, exhibit a pet, and feed and care for pets. **Scaling the Heights** (Pets 3) covers genetics, pet issues, reproduction, caring for newborns, starting a business, and careers.

Cat (Any Age)

Each booklet contains activities for three years. Complete seven cat achievement program activities each year; complete each level within three years; and participate in the required number of project learning experiences each year. If enrolled with an animal, you will need to select the *4-H Cat Record Guide* to accompany this project. If enrolled without an animal, check with your Extension agent for approval. It is suggested that you consult with your Extension agent about using the Self-Determined project, with the cat curriculum as a resource. **Purr-fect Pals** (Cat 1) includes cat selection, breed identification, body parts identification, handling, grooming and showing, home hazards, budgeting, identifying parasites, controlling fleas, and spraying. **Climbing Up!** (Cat 2) features breeds, cat senses, shows, tricks, signs of illness and health, cat sounds, emergency situations, feeding, special diets, and traveling with a cat. In **Leaping Forward** (Cat 3), you will explore veterinary procedures, body systems, diseases, reproduction, genetics, older cats' needs, behavior, showmanship, community laws, animal welfare, and personal strengths.

Potatoes (Intermediate)

You must have the necessary land, time, and equipment to take this project. Certified seed is to be used. Minimum amount to plant: **first year**—100 pounds or 2,400 square feet; **second year**—200 pounds or 4,800 square feet; **third and all other years**—300 pounds or 7,200 square feet. **Exhibit:** 14 of the best potatoes each year.

Strawberry Planting (Intermediate)

You should be interested in working with strawberries for at least two years. The size of the planting is determined by you and a parent. A minimum of 25 plants is required for the first year. **Exhibit:** late August field score.

Strawberry Harvesting (Intermediate)

Harvest the berries from plants started in strawberry planting project the previous year. Records of labor, income, and expenses are kept. If you want to enlarge the planting, you should enroll in strawberry planting, also. **Exhibit:** 4 quarts of berries or as directed by your Extension agent.

Meet the Plants (Beginner)

An introduction to plant science designed to promote personal development as well as illustrate the important relationship between plants and people. This project provides basic information about plants as a foundation for more advanced projects. It introduces plants grown indoors and outdoors—those that give us beauty and those that provide us with food. **Exhibit:** poster showing the uses of different plant parts; or a plant you have propagated, with a poster describing the steps used; or an experiment you have done from the project book, plus a poster showing the procedure and results.

Indoor Gardening (Beginner or Intermediate)

This project will familiarize you with some of the more common houseplants, their care, propagation techniques, transplanting, and pest management. **Exhibit:** collection of plants propagated by the four propagation methods and two posters showing at least two of the methods; or materials and written procedures for transplanting a potbound plant; or a completed experiment from the project book, with a poster explaining the procedure and results.

Vegetable Gardening (Beginner or Intermediate)

This project will teach you about some of the vegetable plants you can grow for food. You will learn what is needed to make vegetable plants grow. You will design and plant a vegetable garden, also. **Exhibit:** transplants you have grown, with a poster showing the steps involved; or garden and calendar plans, with information needed to design a vegetable garden; or container-grown vegetable plants, with a poster showing how you grew and cared for them.

Landscape Gardening (Beginner or Intermediate)

In this project, you will learn about some of the different types of plants you can plant around your house to make it more attractive. You also will learn how to care for these living plants and keep them beautiful. You will design and landscape a flower garden to improve and beautify your environment. **Exhibit:** completed experiment from the project book, with a poster showing the procedure and results; or a story of your landscape project using pictures showing the area before, during,

and after your project; or a landscape plot plan for a new site you are going to landscape around your house, school, or community; or a vase of flowers from your flower garden, with your drawing or a photograph of the garden.

MECHANICAL SCIENCE



Tractor (Intermediate)

(Should be at least 14 years old and have taken the *Small Engines Series*.)

The 4-H tractor program provides you with educational information about agricultural tractors and machinery. You'll develop project skills (principles of engine operation, hydraulic systems, electrical systems, safe operation) and life skills (decision-making, using science and technology, developing communication skills). **Starting Up** (Tractor A) is for you if you have little or no experience with a tractor and equipment. Project skills covered include safety procedures, mechanics of the engine, accessory equipment, how to use the operator's manual, tractor maintenance, and function of different operational systems. **Tractor Operation** (Tractor B) builds on what you learned in Starting Up. Much of the manual is geared toward farm and tractor safety and tractor maintenance. Also covered are mechanics of the engine, accessory equipment, and function of different operational systems. **Moving Out** (Tractor C) requires some prior agricultural tractor and equipment experience. You will learn about farm safety, tractor maintenance, different types of oil systems, and fuel safety. To take **Learning More** (Tractor D), you also need some prior agricultural tractor and equipment experience. This manual contains the major areas: safety, maintenance, mechanics, operational systems, and equipment.

Small Engines (Any Age)

Lawn movers, snow blowers, personal water craft, go-carts, model airplanes, and ATVs are just a few of the literally hundreds of machines powered by small engines. Each booklet in this series contains activities for three years. Complete seven small engines achievement program activities each year; complete each level within three years; and complete all steps of the planning guide learning experiences. **Crank It Up** (Small Engines 1) helps you learn how an engine works, how you might earn some extra money with your small engine project, and how to match the machine to the job. **Warm It Up** (Small Engines 2) focuses on types of engines, engine parts, specialty tools, and types of lubrication. In **Tune It Up** (Small Engines 3), you will tear down and rebuild engines and learn skills that will help you get a job, communicate with professionals and customers, and troubleshoot.

Bicycle (Any Age)

Bicycling is the path to independence – from your first ride to the time you organize your own ride or event. Each booklet contains activities for two years. Complete seven bicycle achievement program activities each year; complete each level within two years; and complete all steps of the planning guide learning experience. **Bicycling for Fun** (Bicycle 1) teaches you the essentials for getting started safely, exploring road rules, and planning a bike ride. Through **Wheels in Motion** (Bicycle 2), you will practice bike maintenance, road rules, and advanced riding skills.

Electric Excitement (Any Age)

The electric energy series will energize and electrify you as you build burglar alarms; learn how to select a good stereo; and explore the magic of electric circuits, magnetism, motors, and electronics. Each booklet contains activities for three years.

Complete seven electricity achievement program activities each year; complete each level within three years; complete all steps of the planning guide learning experiences; and participate in at least two leadership experiences each year.

Magic of Electricity (Electricity 1) explores why certain things insulate from electricity better than others, the effect that magnetism has on various substances, how to build a flashlight, how to build and test a compass, and how to build an electromagnet and electric motor. Decoding circuit diagrams, sending messages by Morse code, and building three-way switches are just a few of the challenges you will face in **Investigating Electricity** (Electricity 2). You will build circuits and test voltages and build a rocket launcher and a burglar alarm as you practice decision-making and communication skills. In **Wired for Power** (Electricity 3), you will learn to measure electrical usage, replace electrical switches, determine electrical loads, evaluate different light bulbs, and test for electrical power. **Entering Electronics** (Electricity 4) introduces the basics of solid-state electronics and provides hands-on activities that give you practical experience in understanding modern-day electronic equipment. You will explore LEDs and SCRs, transistors, and the construction of an SCR intruder alarm; learn how a diode operates and how to assemble a circuit using a transistor; and build a “blink” flasher and an amplifier. It is recommended that you complete Electric 1, 2, and 3 before participating in this project.

Rockets Away (Any Age)

Younger 4-H'ers may take this project only under the direct supervision of an adult. This project explores the basics of rocketry through a variety of hands-on experiments. You are encouraged to apply what you learn through the design, construction, and launching of two-liter bottle rockets.

Exhibit: your constructed model rocket and record of launches. *Two-liter bottle rocket launch kits are available for two-week loan from the 4-H Youth Development Program Unit.*

Woodworking Wonders (Any Age)

The woodworking series provides the opportunity to create and construct using wood and woodworking tools. From the basics of a tape measure and hammer to advanced equipment like routers and table saws, there is something for everyone. Each booklet contains activities for three years. Complete seven woodworking achievement program activities each year; complete each level within three years; complete all steps of the planning guide learning experiences; and participate in the required number of project leadership experiences each year. In **Measuring Up** (Woodworking 1), you will develop the skills that woodworkers use, such as measuring, squaring and cutting a board, driving nails, and using clamps and screws. It is suggested that you begin with this guide to be grounded in the basics of woodworking. **Making the Cut** (Woodworking 2) is for you if you have had experience using basic hand tools, such as a hammer, hand saw, or drill. You will measure, cut, sand, drill, use advanced hand and power tools, apply paint, and use bolts, and staples. **Nailing It Together** (Woodworking 3) is for

you if you are competent with hand tools and have used power tools. You will measure angles, cut dado, and rabbet joints; use a circular saw, a table saw, and a radial arm saw; smooth lumber with a hand planer; and learn to sand and stain wood. **Finishing Up** (Woodworking 4) is for the wood craftsman who is competent with a table saw, radial arm saw, drill press, and jig saw. You will use a router, portable planer and jointer; make a blind mortise and tenon joint; make dovetail joints; and experiment with adhesives and various chemical wood strippers.

NATURAL RESOURCES AND ENVIRONMENT

Spring Wildflowers – First Year (*Intermediate*)

Collect 20 spring wildflowers; make a study of 10 of these wildflowers; learn parts of a flower; label, dry, press, and prepare 15 plants; learn five plants that can be used for food; use a photo for rare plants; make a seed and/or fruit collection of five spring wildflowers; and make a fresh or dried wildflower arrangement.

Exhibit: dried specimens, seed and/or fruit collection, and fresh or dried arrangement.

Spring Wildflowers – Second and Third Year (*Intermediate and Advanced*)

Expand on the first year's activities. The exhibits are similar.

Summer and Fall Wildflowers – First Year (*Intermediate*)

Collect and identify 20 summer and fall wildflowers; study 10 of these wildflowers, answering questions found in project book; learn parts of a flower; label, dry, and press 15 plants; collect seeds and/or fruits of five summer and fall wildflowers; learn five plants that can be used for food; and make a fresh or dried flower arrangement. **Exhibit:** 15 dried specimens, collection of five seeds and/or fruit, and fresh or dried flower arrangement.

Summer and Fall Wildflowers – Second and Third Year (*Intermediate and Advanced*)

Expand on the first year's activities. The exhibits are similar.

Entomology (*Any Age*)

Hands-on activities will help you to learn valuable life skills through insects found in the soil, on plants, in homes, on pets, and in other secret places! Each booklet contains activities for three years. Complete seven entomology achievement program activities each year; complete each level within three years; complete all steps of the planning guide learning experiences; and participate in the required number of entomology project leadership experiences each year. **Creepy Crawlies** (Entomology 1) will help you learn how to make an insect collection, to look for insects, and to identify and classify insects. In **What's Bugging You?** (Entomology 2), you will develop communication skills, identify orders of insects, design insects, complete an insect collection table, plan an insect collection trip, rear meal worms, explore insect legs, and collect insects with an extractor. In **Dragons, Houses and Other Flies** (Entomology 3), you will keep an insect journal, determine the effect of food on mealworm larvae production, test ant food preferences, conduct honey bee learning experiments, organize an insect club, use an insect key, plan a butterfly garden, record insect observations, identify insect mouth types, rear mosquitoes, and make a spider web display.

Tree Identification (*Beginner to Advanced*)

Contains activities for three years. Nearly 105 trees can be found quite easily in West Virginia forests. Another dozen

species are rare. Twenty or so trees are commonly planted as shade trees. This project will help you identify our more important forest trees. Collect, identify, mount, and label 20 leaves or fruits and seeds each year. **Exhibit:** leaf or fruit and seed collection.

Forestry (*Any Age*)

The Forests of Fun curriculum opens the world of forests to youths. At every level, activities involve you in learning about trees, forests, forest ecology, and human reliance on forests. Discover forest resources near home and around the world. Each booklet contains activities for three years. Complete six forestry achievement program activities each year; complete each level within three years; complete all steps of the planning guide learning experiences; and participate in the required project leadership experiences each year. In **Follow the Path** (Forestry 1), explore different types of trees and tree parts, characteristics of different forests, what forests need to grow and thrive, and the different products people get from trees and forests. **Reach for the Canopy** (Forestry 2) has you taking a closer look at the inner-workings of trees, exploring forest change, learning about forest health, and discovering the health benefits trees have on people. In **Explore the Deep Woods** (Forestry 3), you will examine and distinguish different types of trees, look at forests on a global scale, learn to care for trees, and think about how to conserve forests.

Trapping I (*Beginner*)

Identify fur-bearing animals and learn about their feeding habits, their effect on other animals, their habitats, and "signs" of their activities. You will make plaster casts of their tracks.

Exhibit: notebook of information and plaster casts of three fur-bearers' tracks.

Birds I (*Beginner*)

Keep a list of birds you see during the year and identify at least 20 of them. Find and identify one or more birds' nests. Complete any three of the elective activities listed in the project.

Exhibit: photos or drawings of the nests found, and photos or samples of other things made for elective activities, such as birdhouses, birdbaths, feeding stations, etc.

Birds II and III (*Intermediate and Advanced*)

Expand on the first year's activities. The exhibits will be similar.

Fishing for Adventure (*Any Age*)

The 4-H Sportfishing materials will take you on a journey that ranges from the old-time favorites of developing angling skills and creating fishing tackle to aquatic education and the dynamics of people and fish (angling, fisheries management, and folkways). Each booklet contains activities for three years. Complete six sportfishing achievement program activities each year; complete each level within three years; complete all steps of the planning guide learning experiences; and participate in at least three leadership experiences each year. In **Take the Bait** (Sportfishing 1), you'll have fun playing a fish, tying knots, casting to a target, rigging various lines, selecting tackle, identifying where the fish are, using different baits and lures, identifying fish, cooking fish, and identifying internal and external fish parts. **Reel In the Fun** (Sportfishing 2) will help you locate fishing information on the Web; cast using a spinning rod, fly rod, bait casting reel; practice responsible citizenship; research fishing regulations; decorate a lure; sew a fly wallet; tie an artificial fly; and test a water sample. You will develop leadership skills and fishing skills in **Cast Into the Future**

(Sportfishing 3) as you take a friend fishing, demonstrate how to disassemble and reassemble a fishing reel, design and conduct a sportfishing skillathon, make artificial flies, design and craft a lure, customize tackle, build and use a kick net, respond to ethical situations, and interview a professional fisherman.

Exploring Your Environment (Any Age)

You will enjoy the challenge and excitement of exploring the ecology, science, and technology of the environment. Concepts include the four elements of life, connections among living things, and how all plants and animals are affected. Each booklet contains activities for three years. Complete seven environmental achievement program activities each year; complete each level within three years; complete all steps of the planning guide learning experiences; and participate in the required number of project leadership experiences each year. In **Eco-Wonders** (Environment 1), you will discover how clean the air is, what wildlife managers do, how to turn waste into something valuable, and how the food we eat and the clothes we wear affect the environment. You will use the scientific method to investigate what plants need, understand how the four elements of life interact, describe the food chain, measure the weather, make a compost pile, learn how to clean an oil spill, and participate in several bird- and animal-related activities. **Eco-Adventures** (Environment 2) will help you discover how things in nature interrelate, what happens to garbage after it is thrown away, how farmers control pests, and what resources for wildlife are found in your neighborhood. Other activities cover watersheds, soil, pollination, classifying information, pollutants, acid rain, seeds, birds, the MAD law, animal tracks, and many other topics. **Eco-Actions** (Environment 3) will find you accepting the challenge of activities related to biochemistry, the biome, urban sprawl, and wildlife and biodiversity. Each section focuses on an ecological concept and provides activities that help you understand how the environment works.

Reduce, Reuse, Recycle (Any Age)

This project gives background on the history of solid waste, its sources, and the growing environmental problems associated with disposal in a landfill. Its 12 group or individual activities provide hands-on learning experiences. You will become more aware of West Virginia's solid waste problem and become motivated to help clean our state and improve its environment. Exhibit suggestions and scoring guides are included.

LEADERSHIP



Step Up to Leadership (Intermediate to Advanced)

Youths of all ages will share in the fun as they learn the dynamic process of leadership. Mentor guides include background information, interactive activities, and real-life experiences in relationship-building, communication, group process, and planning and organizing. All activities offer a cross-cultural perspective. You can lead in many ways – at home, in clubs, in youth groups, in school, and in the community. The fun continues with an interactive Web site to enhance learning. Complete seven leadership achievement program activities each year; complete each level within three years; complete all steps of the planning guide learning experiences; and participate in the required number of project leadership experiences each year. **My Leadership Journal** (Grades 6-8) focuses on motivation, communication, planning

and organizing, teamwork, meeting manners, and group process. **My Leadership Portfolio** (Grades 9-12) centers on trust, support, partnerships, difficult situations, and decisions.

LEISURE AND CULTURAL EDUCATION



Outdoor Adventures (Any Age)

Welcome to the great outdoors . . . where you can experience fun and excitement as you develop caring relationships and a lifelong appreciation for the outdoors. You will progress from day hikes to overnight camping trips and finally to extended backpacking expeditions as you hike through the three activity guides. Featured are experiences related to food, shelter, Leave No Trace ethics, safety, navigation, equipment, and camp management. Each booklet contains activities for three years. Complete six outdoor adventure achievement program activities each year; complete each level within three years; and complete all steps of the planning guide learning experiences each year. **Hiking Trails** (Outdoor Adventures 1) provides the opportunity to explore the natural world around you by going on day hikes. You will learn how to pack a backpack for a safe and enjoyable day trip. Whether you are a serious camper or just getting started, in **Camping Adventures** (Outdoor Adventures 2), you'll experience many new things. You'll be eating, sleeping, and living in the outdoors on your camping trip. You will consider various types of shelters and tents, planning and packing meals, reading topographic maps, orienteering skills, and keeping your campsite beautiful for future campers. **Backpacking Expeditions** (Outdoor Adventures 3) will help you prepare for being out on the trail for an extended period. It covers clothing, tent setup, backcountry stoves, nutrition, menu planning for multiday hikes, personal hygiene, and basic first aid.

Theatre Arts Adventures (Any Age)

Wouldn't it be fun to pretend, create sound effects, put on makeup, become a character, and take a bow? Working one-on-one with a helper or in a group or classroom, you imagine, refine, and present creative ideas in the areas of acting, mime, movement, puppetry, and technical theatre (from makeup and costumes to lighting). Each booklet contains activities for three years. Complete six theatre arts achievement program activities each year; complete each level within three years; complete all steps of the planning guide learning experiences; and participate in the required number of project leadership experiences each year. **Play the Role** (Theatre Arts 1) introduces you to the world of theatre arts through the fascinating world of make-believe. In **Become a Puppeteer!** (Theatre Arts 2), you will create sound effects, make puppets, and prepare a puppet skit. **Set the Stage!** (Theatre Arts 3) will help you do improvisations, create disguises, and design costumes. You'll learn how to express yourself clearly in the exaggerated manner that is seen on stage and screen.

Recreation I (Intermediate)

Plan and direct your 4-H club in a 15-minute recreation period. Direct a group in at least three party games or folk dances. Lead four games at different times (two should be quiet games, and two should be active games). Lead your club in group singing at three meetings. Develop a creative hobby. **Exhibit:** project book.

Exploring 4-H, Your Family, the World, or the Arts (Beginner)

This project offers many choices. It can be about life in other countries, your family's history, the early days of 4-H, or a hobby. You choose. **First year** – Select one activity. Complete the contract as a plan for the project. **Exhibit:** one item. **Second year** – Select one or two activities and complete the contract as a plan for your project. **Exhibit:** one item.

Third year – Select up to three activities or elaborate on a previous activity; complete contract as a plan for project.

Exhibit: two items.

Exploring 4-H, Your Family, the World, or the Arts (Intermediate)

First year – Select up to three activities. Select one activity and teach some aspect of it to three 4-H'ers. Write a brief statement describing the teaching session. Complete the contract as a plan for the project. **Exhibit:** one item. **Second year** – Select up to four activities and teach at least two skills to a minimum of eight 4-H'ers. Write about the teaching sessions. Complete the contract as a plan for your project. **Exhibit:** one item.

HEALTH AND SAFETY

Health (Any Age)

Keeping Fit and Healthy is a three-part project that promotes health, exercise, and nutrition while you practice life skills of communication, problem-solving, decision-making, and organizing information. In **First Aid in Action** (Health 1), you will practice first aid skills to treat cuts, scrapes, nosebleeds, and bee stings. Also, learn how to respond to someone who is choking or has broken a bone; assemble a first aid kit; and interview members of the medical profession. **Staying Healthy** (Health 2) involves using a self-assessment tool to identify personal talent areas; exploring hygiene, nutrition, and physical activities; and sharing what you discover. **Keeping Fit** (Health 3) includes designing a personal fitness plan and tracking it using your own fitness file. Through interviews and personal experiences, you will discover the benefits of being fit.

INDIVIDUAL AND FAMILY RESOURCES

Management

Financial Champions (Intermediate)

Do I really need this new CD? Can I afford it? Is this purchase part of my spending plan? Do I want this CD only because I saw an ad? Complete the required number of financial achievement program activities; complete each level within one year; complete all steps of the planning guide learning experiences; and participate in the required number of project leadership experiences. The activities in **Money FUNdamentals** (Financial Champions 1) help you to develop a money personality profile and style, explain needs and wants, deal with money decisions, set financial goals, and develop a money plan. In **Money Moves** (Financial Champions 2), you learn how to predict outcomes and analyze finances, calculate interest, determine the cost of credit, manage a checking account, select financial services, evaluate advertising, and make marketplace decisions.

Entrepreneurship: Be the “E”

(Intermediate to Advanced)

This new entrepreneurship curriculum is designed to give you the knowledge, skills, and mindsets to meet the challenges of work and community in the 21st century. The booklet contains activities for nine years. Complete seven entrepreneurship achievement program activities each year; complete each level within three years; complete all steps of the planning guide learning experiences; and participate in the required number of project leadership experiences each year. **Love It** (Section 1) introduces you to the world of entrepreneurship – what it is, who has done it, how some famous products got started, and how to find and make business opportunities. In **Plan It** (Section 2), you will participate in planning experiences to gain the skills needed to be a successful entrepreneur. You'll learn about types of businesses, products and pricing, marketing, partnerships, and agreements and contracts. **Do It** (Section 3) will encourage you to go through the process of researching and creating a business plan and starting a business. You will do market surveys; prepare budget forecasts; learn exit strategies; understand business ethics; project and control cash flows; learn the importance of satisfying the customer; and implement your business plan.

Clothing

Sewing Expressions (Any Age)

This curriculum provides ways for you to create garments and unique costumes. Buying strategies, accessorizing, apparel design, recycling, starting a business, and the social and psychological influences of clothing are featured. Each booklet contains activities for three years. Complete seven sewing achievement program activities each year; complete each level within three years; complete all steps of the planning guide learning experiences; and participate in the required number of project leadership experiences each year. In **Under Construction** (Sewing 1), you will practice the basics of sewing construction and learn how to make simple clothing or accessory pieces. **Fashion Forward** (Sewing 2) helps you develop a fashion sense and the skills needed to create your unique style. **Refine Design** (Sewing 3) focuses on fashion, your unique style, technology in sewing, and careers in the textile industry.

Food Preparation

Fantastic Foods (Any Age)

The updated foods series features lots of exciting hands-on activities. You will have fun in the kitchen as you prepare different foods, do fun experiments, and go on fact-finding missions. The series is designed around six major categories: healthy food selection, food safety, smart food purchasing, food preservation, food preparation, and careers. In addition, you can go to the new Web site to download recipes from across the country and around the world. Each booklet contains activities for two or three years. Complete three activities, each from a different “bite” category in the foods achievement program each year; complete each level within two or three years; complete all steps of the planning guide learning experiences; and participate in the required number of project leadership experiences each year. **Six Easy Bites** (Foods A) is divided into six major categories or “bites.” Each bite gives general background information followed

by four activities. You will prepare colossal chocolate chunk cookies, ice cream, and a cola drink and learn about kitchen. In **Tasty Tidbits** (Foods B), you will solve problems, acquire information, make decisions, keep records, and learn how to use resources wisely. Fun-packed recipes allow choices for food preparation, such as pretzels, biscuits, and lasagna. You learn proper food storage and preservation and smart food purchasing. **You're the Chef** (Foods C) will help you select healthy food, preserve and prepare food, and learn about careers. You will learn to evaluate fad diets, to connect emotions to eating habits, and to can foods. You can enjoy making crazy casseroles, stir-fry vegetables, breadsticks, and strawberry jam. **Foodworks** (Foods D) is a more advanced way for older 4-H youths to expand knowledge and skills. You'll learn how to alter recipes, plan menus, and plan and cater a party. This is a great project if you like to help in the kitchen. Have fun fixing bean burritos, canning snap beans, and making peanut butter.

Child Development

Child Development (Any Age)

This series focuses on the growth and development of the whole child. Research shows that youths need positive relationships with caring adults to be successful. This interactive series will give you many opportunities to help children with their cognitive, emotional, physical, and social growth. Topics range from self-care, community service, and parenting to careers. The American Red Cross Babysitter's Training course and other educational experiences are included. Each booklet contains activities for three years. Complete seven child development achievement program activities each year; complete each level within three years; and complete all steps of the planning guide learning experiences each year.

Growing on My Own (Child Development 1) explores growth and development, inspecting toddler's toys, and making homes hazard free. You will also learn more about life roles, handling emotions, and accepting differences in others. In **Growing with Others** (Child Development 2), you'll learn about self-care, rules, responsibility, and safety in relation to babysitting. **Growing in Communities** (Child Development 3) has you exploring child development careers, gaining experience as a teacher or coach, participating in community service projects, and learning that children with different abilities have different needs.

Personal Development Program (Not Project)

Charting (Advanced)

This personal development program is for you if you are in ninth grade or above; the materials may be used for one year or more. You are eligible for a pin when you have (1) completed the 10th grade; (2) completed two years of 4-H membership (including year[s] of involvement in Charting); (3) completed

the 4-H Charting book, and (4) participated in at least one of the following: (a) Charting class at county camp plus interview, (b) weekend Charting camp plus interview, or (c) three Charting sessions plus interview.

COMMUNICATION ARTS AND SCIENCES



Photography (Intermediate)

This curriculum will help you understand the basics of photography and then apply your skills and build on them to master more sophisticated techniques and take even better photos. **Focus on Photography** (Photography 1) covers equipment basics, taking sharper pictures, lighting and flash, photo composition, sequencing, and evaluating photographs. **Controlling the Image** (Photography 2) explores depth of field, aperture and shutter speeds, hard and soft lighting, silhouettes, and flash techniques. You'll also learn to evaluate composition using the Rule of Thirds, the Golden Triangle, and the Golden Rectangle; to use different viewpoints; and to understand positive and negative space. In **Mastering Photography** (Photography 3), you will understand the use of wide-angle and telephoto lenses, filters and special film, light meters, different light sources, and natural and artificial lighting for effect. You will also learn to shoot reflections, still lifes, formal and informal portraits, and pictures with a purpose. Also you'll understand framing and viewpoints, symmetry, patterns and texture, and color composition.

4-H News Reporter (Intermediate to Advanced)

Make appointments with the newspapers, radio, and television stations in your county to find out how to report your club's news. Follow their instructions and write news releases. Complete the project record form. **Exhibit:** in loose-leaf, 8 1/2" x 11" notebook, write about each media visit. Add examples of your news stories and published clippings. List stations and dates of your radio or TV news coverage and explain it.

MISCELLANEOUS



This Is 4-H (Beginner)

This project deals with basic 4-H program activities. Through puzzles, games, and riddles, you will learn the history of 4-H, pledge, song, and more. **Exhibit one of the following:** a mounted picture, a story of at least 100 words, a 4-H scrapbook, or a three-dimensional clover.

Self-Determined (I Decide)

This is a guide for writing your own project. It is designed for older 4-H members who wish to learn more about a subject than is possible in offered projects. You can also use it to explore a subject in which no project is available. **Exhibit:** determined by you, Extension agent, and leader at the time the project outline is prepared.