



Delaware 4-H Curriculum Descriptions

Science, Engineering and Technology

- ◆ Agriculture Science
 - ◆ Animal Science
- ◆ Engineering and Technology
- ◆ Environmental Science
 - ◆ Plant Science
- ◆ Science Discovery

Healthy Living

- ◆ Health and Fitness
- ◆ Nutrition

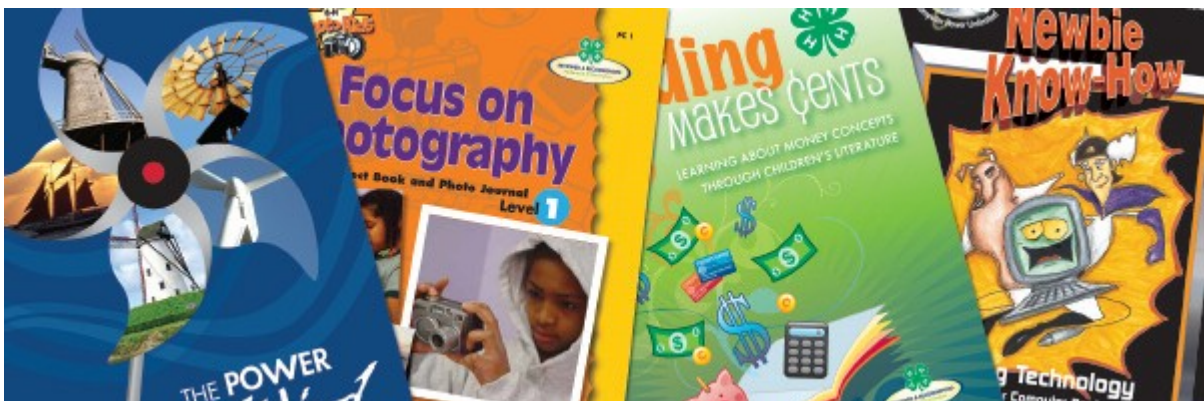
Citizenship

- ◆ Communication and Expressive Arts
 - ◆ Community Action
 - ◆ Leadership
- ◆ Personal Development
- ◆ Workforce Preparation

Resources

- ◆ Experiential Learning

Cloverbuds



2009-2010

Agricultural Science

ACLR

Ag. in the Classroom

Contact your 4-H Agent to receive information on agricultural education programs for in-school audiences and the community 4-H Club.

AAGR

Afterschool Agriculture – Grades 3-5

AAGR1

Acres of Adventure 1

Adults and older youth will enjoy using these lesson plans to quickly engage in learn-by-doing agriculture activities within the following thematic units: Plant Detectives, Mystery Agriculture, All about Agriculture, Fast Food Agriculture.

AAGR2

Acres of Adventure 2

This group activity guide provides ready to use lesson plans that will quickly involve youth in experiential activities related to the following thematic units: Insect Invasion, Farm Physics, Agriculture Gone Wild, Frontier Living.

Animal Science

BEF

Beef—Grades 3-12

BEF1

1 - Bite Into Beef (Grades 3-5)

Youth identify breeds, locate 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.

BEF2

2 - Here's the Beef (Grades 6-8)

Challenges youth with activities related to leg structure, oral reasons, feed ingredients, behavior, nose printing, parasites, fitting, ethical issues, beef carcass composition and retail meat cuts.

BEF3

3 - Leading the Charge (Grades 9-12)

Selection and judging, feeds, careers, health, reproduction, and meats and marketing encourage more in depth learning.

BEF4

Feeder Calf Project Guidelines

(Updated annually and posted on website)

BEFL

Beef - Helper's Guide

Skillathons, quiz bowls, games, presentations, bingo and several management skill activities for groups are found in the Beef Helper's Guide

CAT

Cats—Grades 3-12

CAT1

1 - Purr-fect Pals (Grades 3-5)

Cat 1 Purr-fect Pals includes selection, identifications, body parts identification, handling, grooming, showing, home hazards survey, budgeting, identify parasites, controlling fleas and spaying activities.

CAT2

2 - Climbing Up! (Grades 6-8)

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.

CAT3

3 – Leaping Forward (Grades 9-12)

Youth "Leap Forward" in Cat 3 by exploring veterinary procedures, body systems, diseases, reproduction, genetics, older cat needs, behavior, showmanship, community laws, animal welfare and personal strengths.

CATL

Cat - Helper's Guide

Helpers will find the group activities in the Cat Helper's Guide an excellent way to involve everyone in learn-by-doing sessions.

DRY

Dairy Cattle—Grades 3-12

DRY1

1 – Cowabunga!

Explore dairy cattle breeds, select calves, identify parts of dairy cattle, recognize desirable traits, identify stages of calving and care, pack a show box, groom and show a calf.

DRY2

2 – Mooving Ahead

Youth deepen their learning by focusing on housing, hay quality, milking, keeping animals healthy, parasites, behavior, and food safety. They explore ethical decision making, judging and careers.

DRY3

3 – Rising to the Top

Advanced youth practice mastitis detection, balancing a ration, pregnancy detection, delivery of calf, body condition scoring, selecting cattle through records, promoting dairy products and exploring career opportunities.

DRY4

4-H Dairy Leasing Agreement

—Describes the program & provides forms for the animal owner and 4-Her to sign and must be on file in the County 4-H Office to be official.

DRYL

Dairy Cattle Helper's Guide

These activities will bring any meeting to life. Youth will play Dairy Bingo, and participate in dairy quiz bowls, dairy pyramid game and a dairy skillathon!

Animal Science continued

GOT Dairy Goat—Grades 3-12

GOT1 **1 - Getting Your Goat** (*Grades 3-5*)
Dairy Goat 1 includes activities on selection, body parts, breeds, management, records, safety, disease prevention, feed ingredients, products, grooming and showmanship.

GOT2 **2 - Stepping Out** (*Grades 6-8*)
Dairy Goat 2 continues the fun with activities and information on exhibiting, judging dairy goats, oral reasons, delivering a kid goat, caring for a newborn, performing goat management practices, health problems and diseases, hay quality and products.

GOT3 **3 - Showing the Way** (*Grades 9-12*)
Youth will "Show the Way" in Dairy Goat 3 as they increase their knowledge and skills while planning a judging contest, evaluating a goat herd, selecting a breeding system, determining body condition scores, developing a herd calendar, formulating a ration and developing a commercial.

GOTL **Dairy Goat - Helper's Guide**
The Helper's Guide includes 15 group activities such as presentation sessions, skillathons, record activity, goat pyramid, quiz bowl, G-O-A-T-S Bingo and Super Goat.

DOG Dog—Grades 3-12

DOG1 **1 - Wiggles 'n Wags** (*Grades 3-5*)
Activities relate to dog body parts, selection, correcting behavior, house breaking a puppy, body language, controlling fleas, health care, grooming and how to train a dog to respond to seven basic commands.

DOG2 **2 - Canine Connection** (*Grades 6-8*)
Includes learn-by-doing activities that help youth explore dog web resources, research breed origins, practice safety, locate a missing dog, socialize a dog, practice dog showmanship, teach a dog tricks, as well as learning about dog health, feeding and controlling parasites.

DOG3 **3 - Leading the Pack** (*Grades 9-12*)
Experienced youth will 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 related careers.

DOGL **Dog - Helper's Guide**
Thirteen pages are devoted to helping teach 23 basic and advanced obedience training exercises. Group activities include fun dog games, Canine Good Citizen, skillathons, pet therapy sessions, Dog Pyramid, dog quiz bowls and glossary games

ENT Entomology—Grades K-8

ENT1 **1 - Creepy Crawlies** (*Grades 3-5*)
Youth learn how to make an insect collection, where to look for insects and how to identify and classify insects.

ENT2 **2 - What's Bugging You?** (*Grades 6-8*)
Youth develop communication skills, identify insects to order, design insects, complete an insect collection table, plan an insect collection trip, rear meal worms, explore insect legs and collect insects with an extractor.

ENT3 **3 - Dragons, Houses and Other Flies** (*Grades 9-12*)
Youth keep an insect journal, determine the effect of food on meal worm 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.

ENTL **Entomology - Helper's Guide**
This guide provides practical tips, 14 group activities and supplementary information. Youth compare the leaping abilities of humans and insects, rear and release monarch butterflies, explore how insects transmit disease, study insect behavior, learn insect words, participate in a night safari, develops an insect promotion campaign and conference judge.

CB Exploring Farm Animals—Grades K-3

CBL1 **Exploring Farm Animals**
Adult and teen helpers will enjoy involving youth in learn-by-doing activities. Horses, goats, rabbits, pets, beef cattle, pigs, poultry and dairy cattle are explored. Youth learn the care and feeding of farm animals, how to be safe around animals, identify species, products, terms and animal body parts. Worksheets and games are included.

Animal Science continued

HORS Horse—Grades 3-12

- HORS1** **1 - Giddy Up & Go** (Grades 3-4)
Youth will learn the basics of horse behavior, breads, and safety around horses through a variety of activities, including teaching others.
- HORS2** **2 - Head, Heart & Hooves** (Grades 5-6)
Youth learn about acquiring and raising a horse including selecting a horse, horse nutrition and care, equine teeth and bones, judging, including giving oral reasons.
- HORS3** **3 - Stable Relationships** (Grades 7-9)
Keeping horses healthy and practicing basic care techniques are emphasized in this activity guide.

- HORS4** **4 - Riding the Range** (Grades 10-12)
Youth learn nine basic riding skills and 10 horsemanship skills, training techniques, trail riding and selection and use of tack.
- HORS5** **5 - Jumping to New Heights** (Grades 10-12)
Youth learn advanced riding skills, the Quarter System, horse showmanship, ethics and leadership.
- HORS6** **4-H Horse Show Rule Book**
Provides rules governing Delaware 4-H Horse Shows.
- HORSL** **Horse - Helper's Guide** (Grades 3-12)
Features 17 group activities to get everyone involved.
- HORSL2** **Horse Judging Manual**

MGT Meat Goat—Grades 3-12

- MGT1** **1 - Just Browsing** (Grades 3-5)
Youth will explore goat body parts, goat selection, breeds, record keeping, meat goat and dairy conformation, show preparations, sportsmanship, goat health, feed selection and several management skills.
- MGT2** **2 - Get Growing with Meat Goats** (Grades 6-8)
Features activities designed for youth to actively explore goat diseases, the veterinary profession, selecting stock, identification of poisonous plants, body condition, water quality, goat predators, kidding, goat reproduction and showing meat goats.

- MGT3** **3 - Meating the Future** (Grades 9-12)
Youth discover how to control parasites, practice biosecurity, conduct a judging clinic, judge goats, give oral reasons, select sires, balance a ration, compare forage samples, practice sound ethics, prevent diseases & more.
- MGT4** **Meat Goat Project Guidelines**
(Updated annually and posted on website)
- MGTL** **Meat Goat - Helper's Guide** (Grades 3-12)
Youth will complete a project record, developing a management calendar, completing a meat quality assurance program, participating in a quiz bowl, skillathon and tour, giving a presentation and exploring goat-related careers.

PET Pets—Grades 3-12

- PET1** **1 - Pet Pals** (Grades 3-5)
Features 14 activities including pet selection, pet body parts identification, pet art, pet communications, handling, housing and daily needs.
- PET2** **2 - Scurrying Ahead** (Grades 6-8)
Youth will practice exhibiting, debating pet sayings, creating a story, observing pet behavior, promoting a product and learning to feed and care for their pets.

- PET3** **3 - Scaling the Heights** (Grades 9-12)
Activities that explore genetics, pet issues, reproduction, caring for newborns, starting your own business and careers are just some of the challenges in Pet 3.
- PETL** **Pets - Helper's Guide**
Project helpers will find many fun and engaging group games and activities to further expand the pet project experience in the Pet Helper's Guide.

POL Poultry —Grades 3-12

- POL1** **1 - Scratching the Surface** (Grades 3-5)
Activities include parts identification, species and breeds, selection, exploring an egg, feather features, cooking eggs, feeding, handling, washing and showing.
- POL2** **2 - Testing Your Wings** (Grades 6-8)
Covers budgeting, pecking order, feed tags, retail products, bone identification, carcass grading, health care and egg exploration .
- POL3** **3 - Flocking Together** (Grades 9-12)
Plan a judging clinic, manage a flock, exploring careers, processing chickens, conducting poultry games and discuss values and ethics.
- POLL** **Poultry - Helper's Guide**

Embryology in the Classroom—Grades 2-8

- POL4L** **Embryology 1 - Hatching Classroom Projects** (Beginner Helper's Guide—Grades 2-5)
Several hands-on activities will amaze youth while they build a candler and make a brooder box for baby chicks.
- POL5L** **Embryology 2 - Experiments in Poultry Science** (Advanced Helper's Guide—Grades 6-8)
Youth conduct several experiments that reinforce the scientific method. Student work sheets, color posters and interactive web-based curriculum experiences support each level.
- POL6** **Delaware Commercial Broiler Project and Record**
Project guidelines, record, and outline for project completion.

Animal Science continued

RAB Rabbit—Grades 3-12

RAB1 **1 – What’s Hoppening?** (*Grades 3-5*)
Youth will discover how to identify breeds, handle and show rabbits, identify rabbit parts and equipment, recognize a healthy rabbit, read a pedigree and kindle a litter.

RAB2 **2 – Making Tracks** (*Grades 6-8*)
Youth will recognize body types, judge and show rabbits, tattoo a rabbit, keep records, identify diseases, administer medication, record growth rates and market products.

RAB3 **3 – All Ears** (*Grades 9-12*)
Older youth will develop a breeding program, design a rabbitry, cull based on production, prevent diseases, develop sportsmanship and develop a marketing plan.

RABL **Rabbit - Helper's Guide** (*Grades 3-12*)
The Helper's Guide features group activities and answer keys. The Model Rabbit Pattern is an excellent tool for identifying parts, determining sex, practicing handling, trimming nails and other management practices.

SHP Sheep—Grades 3-12

SHP1 **1 - Lambs, Rams and You** (*Grades 3-5*)
Sheep 1 introduces youth 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.

SHP2 **2 - Shear Delight** (*Grades 6-8*)
Youth will practice presenting oral reasons, determine yield grades, compare digestive systems, explore a feed tag, practice management practices, deliver a lamb, treat parasites and discuss ethical decision making.

SHP3 **3 - Leading the Flock** (*Grades 9-12*)
Sheep 3 features activities related to judging, budgeting, web surfing, reproduction and genetics, surveying consumers, career exploration, marketing products and teaching others.

SHP4 **Market Lamb Project Guidelines**
(Updated annually and posted on website)

SHPL **Sheep Helper's Guide**
Provides additional activities for the project group or club to be used with SHP1-3.

SWN Swine—Grades 4-12

SWN1 **1 – The Incredible Pig** (*Grades 3-5*)
Youth will enjoy naming breeds, learning sheep body parts, judging market hogs, exploring a digestive system, examining a healthy pig, identifying pork cuts, practicing fitting and showing and many other activities in Swine 1.

SWN2 **2 - Putting the Oink in Pig** (*Grades 6-8*)
Activities in Swine 2 include managing baby pigs, balancing a ration, exploring swine diseases, preparing pork, discovering swine careers and packing a show box.

SWN3 **3 – Going Whole Hog** (*Grades 9-12*)
Advanced youth will plan a breeding system, judge breeding gilts, design a swine operation, complete a job application, explore career opportunities and international markets plus many other challenging activities.

SWN4 **Market Hog Project Guidelines** (Updated annually and posted on website)

SWNL **Swine - Helper's Guide**
Youth will plan a program, complete project records, develop a management calendar, explore the pork quality assurance program and investigate character education.

VET Veterinary Science—Grades 3-12

VET1 **Veterinary Science**
1 – From Airedales to Zebras (*Grades 3-5*)
Youth learn about the normal animal, basic anatomy and systems, elementary principles of disease and careers with animals.

VET2 **2 – All Systems Go!** (*Grades 6-8*)
Youth examine health and disease topics, normal and abnormal conditions in animals, and veterinary careers.

VET3 **3 – On the Cutting Edge** (*Grades 9-12*)
Youth participate in-depth investigations of normal and abnormal systems, preparation for college and exploration of the diversity of the veterinary profession.

VETL **Veterinary - Helper's Guide** (*Grades 3-12*)
These supplemental materials provide helpers with activities to facilitate learning for various ages of youth. Numerous group activities help youth develop essential life skills as they pursue their interest in veterinary medicine.

Science, Engineering

and Technology

Engineering and Technology

AER Aerospace Adventures—Grades K-12

AER1 **1 - Pre-Flight** (Grades K-2)

Youth learn to talk like an astronaut and how an airplane works. Youth practice problem solving, recognizing patterns and communicating.

AER2 **2 - Lift-Off** (Grades 3-5)

Youth fly kites, participate in airplane contests, launch rockets, explore space, make a glider, construct a straw rocket and experience disorientation.

AER3 **3 - Reaching New Heights** (Grades 6-8)

Youth will make a shuttle on a string, a Japanese kite, a hang glider and a control panel of an aircraft.

AER4 **4 - Pilot in Command** (Grades 9-12)

Youth create an altitude tracker, determine fuel efficiency, explore pilot certification, evaluate navigation systems, learn about airport issues.

AERL1 **Aerospace - Helper's Guide**

Learn hands-on experiential group activities, such as an aerospace quiz bowls, skillathons and more.

COM Computer Power Unlimited—Ages 12 and up

COM1 **1—Inside the Box** (Ages 12 and up)

By the end of this activity guide youth will be able to: Identify computer components, operating systems; Exhibit knowledge of the building, maintenance and repair of computers.

COM2 **2—Peer to Peer** (Ages 12 and up)

Upon completion, youth will be able to: demonstrate a basic understanding of networking; Work with adults and peers to build a functioning network .

COM3 **Teens Teaching Tech** (Ages 14 and up)

Work with peers, adults and community partners to develop service related computer goals; Develop lesson plans and teach diverse populations basic computer skills.

COML **Newbie Know How—Supplement** (Beginners)

Newbie Know-How is a supplemental teaching resource for beginners that can be used with Teens Teaching Tech.

ELE Electric Excitement/Electronics—Grades 4-12

ELE1 **1 - Magic of Electricity** (Grades 3-5)

Youth explore why certain things insulate from electricity better than others, the effect that magnetism has various substances, how to build a flashlight, build and test a compass, build an electromagnet and electric motor.

ELE2 **2 - Investigating Electricity** (Grades 6-8)

Youth build circuits and test voltages, build a rocket launcher and a burglar alarm as they practice decision making and communication. This unit is designed for youth who understand magnetism, electron flow and circuit design.

ELE3 **3 - Wired for Power** (Grades 6-12)

Youth build on skills learned in levels 1 & 2 plus learn some new ones. such as measuring electrical usage, replacing electrical switches and determining electrical loads. Youth will also evaluate different light bulbs and test for electrical power.

ELEC4 **4 – Entering Electronics** (Grades 9-12)

This unit introduces the basics of solid-state electronics and provides hands-on activities that give youth practical experience in understanding modern day electronic equipment. This unit is for the intermediate to advanced learner

ELEL **Electric - Helper's Guide**

GS Geospatial—Grades 4-12

GSL **Exploring Spaces, Going Places CD**

1 - Getting Out

Youth are introduced to new ways of thinking about geographic positions, navigational tools (like GPS, compasses, maps and globes), identifying locations, measuring distances and more. Project activities like "Mega Bite's Mystery," "Map Teller," "Data Everywhere!" and "The Navigator" make learning fun.

2—On the Trail

Youth will learn how to collect data, combine the data with geographical positions and then make their own maps. Maps of school grounds, neighborhoods, farms or town, states and beyond can be made.

3—Reaching Your Destination

Can maps solve problems? Can they lower traffic congestion, pinpoint pollution sources, boost tourism, reduce disease and control crime? Advanced learners find solutions to problems like these as they develop and use multi-layered maps to solve complex problems.

Geospatial Helper's Guide

All the above levels are included in this CD. Activities include GPS Treasure Hunt, As the Ring Turns, Navigational Skillathon, I-M-A-G-E Bingo, Letterboxing, GPS Search & Rescue – Find Bubba! and much more!

ROB Robotics

Under revision – downloadable only from <http://www.4-hcurriculum.org/robotics.aspx>

Science, Engineering

and Technology

Engineering and Technology *continued*

TC Sewing Expressions—Grades 4-12

TC0 **Let's Sew—A Beginner's Sewing Guide**

Includes the basics of using sewing machines and sergers, fabric facts, and using patterns, adding a patch pocket, stitching buttonholes, inserting a centered or lapped zipper, and making a wrapped corner collar.

TC1 **1 – Under Construction**

Youth practice the basics of sewing construction and how to make simple clothing or accessory pieces.

TC2 **2 – Fashion Forward**

Fashion Forward will help youth develop their fashion

sense and the skills needed to create a unique style of their own.

TC3 **3 – Refine Design**

Youth will learn more about fashion and their unique style as well as technology in sewing and careers in the textile industry.

TCL **Sewing Expressions Helper's Guide**

Youth will learn more about fashion and their unique style, as well as technology in sewing and careers in the textile industry.

SEN Small Engines—Grades 3-12

SEN1 **1 - Crank It Up**

Youth focus on basic small engine knowledge, study external engine parts, discover tools of the trade and learn about the concepts behind what makes small engines work. They explore the uses of small engines and safety issues.

SEN2 **2 - Warm It Up**

Learn about the internal parts of engines, engine sizes, compression ratios, seasoning their engines and safety issues. Youth also learn about occupational possibilities and about starting their own business.

SEN3 **3 - Tune It Up**

Tune it up is for the serious mechanic as your focus will change to learning skills that will help you get a job in this field, learning how to communicate with professionals and customers and of course troubleshooting. In this book you will be tearing down and rebuilding engines.

SENL **Small Engines Helper's Guide**

The helper's guide includes group activities, helpful hints for each activity in three youth guides and additional small engine project meeting ideas.

POW The Power of the Wind—Grades 3-5

POW1 **1—The Power of the Wind Youth Guide**

Involves youth in the engineering design process as they learn about the wind and its uses.

New this year!

POWL **The Power of the Wind Helper's Guide**

TRC Tractors, and Field Equipment

TRC1 **Getting Acquainted with Your Tractor**

To do daily maintenance and safety checks; to become familiar with the controls on the tractor; how to be safe and be a safe operator; what makes the engine run; about proper starting and stopping.

TRC2 **Assuring Safe/Efficient Tractor Operations**

Focuses on upper operation of farm equipment with emphasis on safety.

TRC3 **Safe Operation of Agricultural Equipment**

Tractor certification manual.

SAFT **Tractor Safety Certification**

Contact your County 4-H agent for information.

WSC Woodworking Wonders—Grades 3-12

WSC1 **1 - Measuring Up** (Grades 3-4)

Youth will develop skills that wood-workers use, such as measuring, squaring & cutting a board, driving nails, and using clamps and screws. It is suggested that all youth begin with this guide to be grounded in the basics of woodworking.

WSC2 **2 - Making the Cut** (Grades 4-6)

Youth will measure, cut, sand, drill, use advanced hand and power tools, apply paint, and use bolts and staples. Woodworking project choices include building a sawhorse, birdhouse, toolbox, or stool. Life skills emphasized in this curriculum are communication, decision-making, planning and organizing, and learning to learn.

WSC3 **3 - Nailing it Together** (Grades 6-8)

Youth will practice measuring angles, cutting dado and rabbet joints (page 12); 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.

WSC4 **4 - Finishing Up** (Grades 9-12)

Specific woodworking skills include using a router, portable planer and jointer; making a blind mortise and tenon joint; making dovetail joints; and experimenting with adhesives and various chemical wood strippers.

WSC5 **Woodworking - Helper's Guide**

This guide provides the helper with a variety of group activities that will help youth broaden their understanding of the basic woodworking concepts.

Science, Engineering and Technology

Environmental Science

FSH Fishing for Adventure—Grades 3-12

- FSH1 Fishing 1 - Take the Bait (Grades 3-5)**
Youth 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.
- FSH2 Fishing 2 - Reel in the Fun (Grades 7-9)**
Youth locate fishing info. 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 & test a water sample.

- FSH3 Fishing 3 - Cast into the Future (Grades 9-12)**
Youth develop their leadership skills as well as their fishing skills as they take a friend fishing, demonstrate how to disassemble and reassemble a fishing reel, design and conduct a sport fishing skillathon, make artificial flies, designs and crafts a lure, customize tackle, builds and uses a kick net, responds to ethical situations and interviews a professional fisherman.
- FSHL Fishing for Adventure Helper's Guide**
For the group helper looking for activities that will involve the entire group and even the parents, this guide is an excellent resource.

FOR Forestry—Grades 3-12

- FOR1 Forestry 1 - Follow the Path (Grades 3-5)**
Youth 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.
- FOR2 Forestry 2 - Reach for the Canopy (Grades 4-6)**
Youth take a closer look at the inner-workings of trees, explore forest change, learn about forest health concerns and discover the health benefits trees have on people.

- FOR3 Forestry 3 - Explore the Deep Woods (Grades 7-12)**
Youth 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.
- FORL Forestry Helper's Guide**
The Helper's Guide provides useful forest information, group youth activities and practical tips for volunteers. Using this curriculum, youth develop a life-long appreciation for forests and have loads of fun in the process.

OUT Outdoor Adventures—Grades 3-12

- OUT1 Outdoor 1 – Hiking Trails**
Hiking Trails includes shelter selection; Leave No Trace camping skills; outdoor cooking and environmental awareness and appreciation.
- OUT2 Outdoor 2 – Camping Adventures**
Camping Adventures focuses on hiking for a day. It will include clothing needs; what to pack in a daypack; reading topographic maps and orienteering skills

- OUT3 Outdoor 3 – Backpacking Expeditions**
Focuses on being on the trail for extended periods of time. It includes clothing needs; tent setup; using back-country stoves; basic nutrition; menu planning for multi-day hikes; personal hygiene & basic first aid.
- OUTL Outdoor Adventures Helper's Guide**
Enables helpers to facilitate the teaching of the curriculum. Utilizing the experiential learning model, the guide targets technical, organizational, problem solving, safety and communication skills.

SS Shooting Sports Record (Available to Certified 4-H Shooting Sports Volunteers)

- | | | | |
|------------|---|------------|-------------------------------------|
| SS1 | Shooting Sports Project Record | SS5 | Air Rifle Shooting Record |
| SS2 | Muzzleloader Shooting Record | SS6 | Shotgun Shooting Record |
| SS3 | Small bore Rifle Shooting Record | SS7 | Archery Shooting Record |
| SS4 | Air Pistol Shooting Record | SS8 | Hunting Safety and Knowledge |

Science, Engineering and Technology

Plant Science

EGAR Down-to-Earth – Classroom Gardening Grades 4-6

EGAR Helps the leader to use gardening as a means to explore plant growth and development. Through this hands-on, minds-on program, youth get the basics of botany, the gist of gardening, the essentials of ecology

and much more. Award winning activity guide is an excellent resource for school enrichment programs, organized 4-H clubs, school age child care educators, after school programs, nature centers, summer youth camps, scouts and traditional school settings.

VEG Gardening—Grades 3-12

VEG1 See Them Sprout

Four grade-level activity guides with exciting activities in six major categories: Garden Planning, Planting a Garden, While You Wait, Garden Care, Harvesting and Storage and Careers.

VEG2 Let's Get Growing

Four grade-level activity guides with exciting activities in 6 categories: Garden Planning, Planting, While You Wait, Garden Care, Harvesting & Storage and Careers.

VEG3 Take Your Pick

Four grade-level activity guides with exciting activities in 6 categories: Garden Planning, Planting, While You Wait, Garden Care, Harvesting & Storage and Careers.

VEG4 Growing Profits

Four grade-level activity guides with exciting activities in 6 categories: Garden Planning, Planting, While You Wait, Garden Care, Harvesting & Storage and Careers.

VEGL Gardening - Helper's Guide

Helper's Guide offers activities, ideas and content to help leaders with their challenging and exciting role.

Science Discovery

SDS Science Discovery Series—Grades 3-6

SDS1 Science Discovery Series - 1 (Grades 3-5)

Youth develop science skills as they explore whales, rocks and minerals, water quality, trees and recycling.

SDS2 Science Discovery Series - 2 (Grades 4-6)

Youth discover oceanography, spiders, weather, trees and astronomy. Lesson plans include background information, a lesson outline, life skill objectives and evaluation instruments.

4-H is a community of young people across America who are learning leadership, citizenship and life skills.

Healthy Living

Health and Fitness

BIK Bicycle Adventures—Grades K-6

BIK1 1—Bicycling for Fun

Beginning riders learn the essentials for getting started safely and successfully! This guide contains creative hands-on activities and connections to DVD and Web resources. Youth begin exploring the basics toward lifelong cycling. Activities help youth learn safety, road rules and planning for a pleasant ride.

BIK2 2—Wheels in Motion

Youth who are riding learn advanced skills as they explore their surroundings. Youth choose a bike that's right for them and practice bike maintenance and road rules to make their ride safe and fun.

BIKL1 Don't Get Stuck Fix It Video

Youth may also want their very own copy of the "Don't Get Stuck: Fix It" video or DVD. For ease of use, the preventive maintenance and repair tips shown in the video are color coded so youth can quickly locate just the segment needed. Eleven different segments from fitting a helmet to adjusting brakes are featured.

BIKL2 Bicycle - Helper's Guide

This helper's guide contains information and activities related to basic bicycle handling, traffic skills and bicycle events and activities the whole group will enjoy.

BIKL3 Bicycle Safety Guide

Child Development—Grades 3-12

CD1 1 - Growing On My Own (Grades 3-4)

Youth learn how they grow and develop; how to inspect toddler's toys and make their home hazard free. They learn more about their roles in life, how to handle their emotions and accept differences in others. .

CD2 2 - Growing with Others (Grades 5-6)

Youth learn about self-care, rules, responsibility, and safety and are introduced to babysitting. They work with others and gain awareness of common dangers in their world.

CD3 3 - Growing in Communities (Grades 7-10)

Youth explore child development careers, gain experience as a teacher or coach, participate in a community service project and learn that children with different abilities have different needs.

CDL Child Dev Helper's Guide (Grades 3-10)

The Helper's Guide features nine enhanced group activities. Youth are encouraged to work with younger kids in after school programs, day care centers, and day camps as well as with kids in their own 4-H club.

HEL Keeping Fit and Healthy—Grades 3-12

HEL1 1—First Aid in Action

Youth practice first aid skills to treat cuts, scrapes, nosebleeds and bee stings. They 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

HEL2 2—Staying Healthy

Youth use a self-assessment tool to identify personal talent areas – “smarts,” explore hygiene, nutrition and

physical activities, and share what they discover with a new appreciation of personal interests and talents.

HEL3 3—Keeping Fit

Youth design their own personal fitness plan and track it using their own fitness file. through interviews and personal experiences youth discover the benefits to being fit as they practice making decisions, managing themselves and speaking with others.

ADT Health Rocks—Grades 3-8

Special tobacco prevention program aimed at youth 8-14 years old with the goal of bringing youth, families and communities together to reduce tobacco, alcohol and drug use by youth. The curriculum is designed for teen/adult facilitation. Contact your 4-H agent to participate.

Healthy Living

Nutrition

FN Foods—Grades 3-12

- FN1** **A - Six Easy Bites** (*Grades 3-5*)
Youth prepare foods, do fun experiments and go on fact-finding missions.
- FN2** **B - Tasty Tidbits** (*Grades 6-8*)
Youth learn healthy food selection, food safety and smart food purchasing through exciting and challenging activities.
- FN3** **C - You're the Chef** (*Grades 7-9*)
Youth explore food careers and learn food preservation and preparation through activities.

- FN4** **D - Foodworks** (*Grades 9-12*)
Youth learn about foods and more advanced food preparation. Recipes from across the country and around the world may be downloaded from a fun, new website.
- FN5** **Breads**
- FN6** **Rising to the Occasion – Bread Making**
- FNL** **Foods - Helper's Guide**

FP Food Preservation

- FP** Food Preservation
A packet of materials that review the principles of canning foods in a boiling water bath and pressure canner. Techniques for proper freezing and drying foods are also included.

FS Food Safety

- FSL** Chances and Choices (*Grades 6-8*)
For additional food safety resources, contact your county 4-H agent

MM Microwave Magic—Grades 3-12

- MMA** **Bags of Tricks**
Youth engage in activities to understand how the microwave works, learn to use the microwave safely and prepare foods such as scrambled eggs, apples, popcorn treats, fudge and desserts.
- MMB** **Micro Magicians**
Youth participate in activities on understanding watts and prepare foods such as potatoes, vegetables, pudding bar cookies, beans, upside down cake and brownies.

- MMC** **Amazing Rays**
Through activities youth practice more advanced microwave techniques such as shielding, defrosting and browning.
- MMD** **Presto Meals**
Youth learn techniques such as adapting recipes for the microwave, blanching fruits and vegetables and stacking whole meals.
- MML** **Microwave Magic Helper's Guide**
This guide for helpers includes group activities and answers to the questions posed in the youth guides.

Citizenship

Communication and Expressive Arts

AC Arts and Crafts—Grades K-6

ACL A Palette of Fun—Grades K-6

Children will learn art through cutting and pasting, painting, sculpting, drawing, printing, construction with fibers and other materials.

AVA Advanced Visual Arts – Grades 7-12

AVA1 1 – Sketchbook Crossroads

Youth practice drawing, fiber arts and sculpting to develop their artistic skills and talents.

AVA2 2 – Portfolio Pathways

Youth learn painting, printing and graphic design techniques.

COMM Communications—Express Yourself Grades 3-12

COMM1 1 – Picking Up the Pieces

Youth engage in nonverbal, verbal, and written activities that stretch and strengthen personal communications skills. encrypting codes, writing songs, giving directions, dealing with bullies, and making a statement through art are a few of the exciting activities.

COMM2 2 – Putting it Together

Youth practice and gain confidence in communicating in a variety of situations. They gain confidence as strong communicators as they present oral reasons, plan and present speeches, communicate assertively, practice making a good first impression and mentor others.

COMM3 3 – The Perfect Fit

Youth polish their communication skills and develop a public presence by speaking in public, exploring communication careers, writing resumes, interviewing for a job, developing presentations, dealing with anxiety and more.

COMM L Communications Helper’s Guide

Helpers support youth as they interact and strengthen personal communications skills through skillathons, communication games, demonstrations and creating advertisements.

PHO Photography

PHO1 1—Focus on Photography

Youth will focus on equipment basics, taking sharper pictures, the concept of light and flash, photo composition, approaches, sequencing and evaluating photographs.

PHO2 2—Controlling the Image

Youth will explore depth of field, aperture and shutter speeds, hard and soft lighting, silhouettes and flash techniques. Youth will also learn

PHO3 3—Mastering Photography

Youth will understand the use of wide-angle and telephoto lenses, filters and special film, light meters, shooting photos with different light sources and the use of natural and artificial lighting for effect. Youth will also learn to shoot reflections, using framing and viewpoints, still-life, formal and informal portraits, symmetry, patterns and texture, color composition, pictures with a purpose and much more.

DEM Delaware 4-H Demonstration and Illustrated Talk Evaluation Score Sheet

This score sheet shares with members and leaders the various categories that are evaluated in these events. It also describes how each area is judged.

LCA Latino Cultural Arts—Grades K-8

LCA L Que Rico! La Cultura Bilingual Helper’s Guide

Youth discover the Latino culture as they develop an understanding of the Latino people and their traditional art forms through instrument making, jewelry making, weaving, muraling and mask making. Youth

experience the celebrations that surround the holidays in the Latino culture and sample the flavors of the Latino people through the activities of storytelling, mosaics and yarn art.

Citizenship

Communication and Expressive Arts continued

PA Theater Arts – Grades 3-12

- PA1** **1 – Play the Role – Acting** - *Grades K-2*
The activities in this first level are a wonderful introduction to the world of theater arts as the child and helper learn together in the fascinating world of make believe.
- PA2** **2 – Become a Puppeteer - Puppetry** - *Grades 3-5*
This guide is exciting and lots of fun for both youth and helpers. Youth create sound effects, make puppets and prepare a puppet skit. Although acting is the primary subject matter, young people will practice and learn many life skills such as problem solving, managing feelings, and decision making and communicating.

- PA3** **3 - Set the Stage! - Stagecraft** - *Grades 6-8*
Youth do improvisations, create disguises and design costumes. They learn how to express themselves clearly in the exaggerated manner that is seen on stage and screen. Other life skills practiced include problem solving, accepting differences, communicating, learning to learn and decision-making.
- PAL** **Theatre Arts Helper's Guide** - Sidecoaching
Provides additional activities and valuable resources for helper to engage youth in the creative process of "Imagination in Action."

Community Action

CIT Citizenship/Public Adventures—Grades 4-12

- CIT1** **Citizenship Adventure Kit**
Decision-making, problem solving and teamwork are just three skills that program participants will stamp on their passport. Youth will have the opportunity to solve real community issues. They keep a journal of their thoughts, decisions and actions throughout the process.
- CIT1L** **Citizenship Guide's Handbook**
This is the perfect curriculum for channeling the energy of teens toward solving real problems in their community. The curriculum emphasizes the importance of proper needs assessment, knowing your advocates and detractors, formulating a plan and knowing what success looks like. Decision-making and goal setting are two prime life skills addressed.

SL Service Learning—Grades 5-12

- SL1** **Service Learning 1 - Agents of Change** + CD
Appropriate for a middle-school aged audience - Youth become "Special Opportunities Agents," as they follow a series of exciting activities that engage them in their community and allow them to reflect on their experiences. Youth identify community needs, plan a service project and execute their idea using the manual. The CD bundled with the book includes supporting materials and a Journal for youth to record their experiences.
- SL2** **Service Learning 2—Raise Your Voice** + CD
Designed for a high school-aged audience - This no-nonsense guide engages older youth as young leaders. Voices of real young people engaged in service inspire youth and connect them with others who made an impact. Youth plan and implement their own service project. A journal for youth reflections and support materials are included on the accompanying CD.
- SLL** **Service Learning Helper's Guide**
This exciting guide for leaders offers group service learning activities like community mapping, identifying group roles and journaling. It offers advice for mentors seeking to guide youth through enriching learning experiences. Reflective journaling helps leaders explore their personal leadership style and the value of service.

Citizenship

Leadership

EXP Exploring 4-H—Grades 2-4

EXP **Exploring the Treasures of 4-H** (*Grades 2-4*)
This activity guide provides a "treasure hunt" for youth to explore the joys of 4-H by discovering their interests, potential 4-H projects and finding 4-H where they live with the guidance of parents or other adult helpers.

EXPL **Treasures of 4-H Group Helper's Guide**
This guide is designed for teachers, volunteer leaders and other educators. Activities are organized into eight categories linked to national education standards with suggestions for continued study in related 4-H projects.

EXPL2 **Exploring 4-H Leader's Guide**

LDR Step Up to Leadership—Grades K-12

LDR1 **1 - My Leadership Workbook** (*Grades 3-5*)
Youth will practice leadership through this action-packed workbook. From "putting themselves in someone else's shoes" to "gathering up loose ends" and "freezing a conflict", youth actively learn about individual leadership skills.

LDR2 **2 - My Leadership Journal** (*Grades 6-8*)
Youth learn the importance of understanding themselves as a leader. Teamwork is emphasized as the youth walk the teamwork tightrope and search for

team talent. Youth are encouraged to keep a "journal" of their leadership journey.

LDR3 **3 - My Leadership Portfolio** (*Grades 9-12*)
"Real Life" leadership activities are incorporated in this project for older youth. The youth are encouraged to develop a portfolio of their leadership experiences. The youth-directed activities lead individuals to take on greater leadership responsibilities.

LDRL1 **Leadership Mentor Guide 1** (*Grades 3-5*)

LDRL2 **Leadership Mentor Guide 2** (*Grades 6-12*)

Personal Development

CON Consumer Savvy—Grades 4-12

CON1 **1 – The Consumer In Me** (*Grades 4-5*)
Youth will experience what it means to be a consumer through saving, spending and sharing.

CON2 **2 – Consumer Wise** (*Grades 6-8*)
Consumer Wise introduces youth to the influence of peer pressure, the power of advertising and the expanding Web market as they learn to make independent decisions while shopping.

CON3 **3 – Consumer Roadmap** (*Grades 9-12*)
Teens navigate the potholes in the marketplace enroot to becoming savvy consumers.

CONL **Consumer Savvy Helper's Guide.**
Provides supplemental materials that help adult leaders facilitate learning situations or various ages of youth.

JUD Critical Thinking

JUD1 **Livestock Judging Manual**
JUD2 **The National Poultry Judging Manual**
Discusses past production of judging, egg quality and ready-to-cook poultry.

JUD3 **Wildlife Judging**
Prepares youth for the wildlife habitat judging contest by looking at wildlife, their habitat, and reviewing how to read aerial photos.

JUD4 **4-H Horse Judging Guide**
Gives information to prepare 4-H member to judge horses.

JUD5 **Judging Cards**
SD **Make Up Your Own Mind**

FM Financial Champions—Grades 7-12

FM1 **1- Money FUNdamentals** (*Grades 7-9*)
Youth learn money management skills, including deciding whether to make a purchase, determining whether they can afford it, and living within a spending plan.

FM2 **2 - Money Moves** (*Grades 9-12*)
Youth learn about wants and needs, values, goal-setting, communications, ways to use and save

money, the benefits and drawbacks of credit, advertising influences, consumer decision-making and how to select financial services.

FML **Financial Champions Helper's Guide**
Youth participate in group experiences and financial activities. An interactive web-based game reinforces the concepts learned in this curriculum.

RMC **Reading Makes Cents—Grades 3-5**
Youth learn about money including saving, spending, sharing, earning, borrowing, and lending.

New this Year !

Citizenship

Workforce Preparation

FC Entrepreneurship—Grades 7-12

FC **Be the E**

1. Passion - Love It

Youth discover what it is, who has done it, how some famous products got started and how to find and make business opportunities.

2. Creativity - Plan It

Youth learn about types of businesses, products and pricing, marketing, partnerships, agreements and contracts.

3. Risk Taker - Do It

Youth go through the process of researching and creating a business plan and starting a business. They do market surveys, budget forecasts, exit strategies, business ethics, projecting and controlling cash flows, satisfying the customer, and developing, presenting and implementing a business plan.

FCL **Entrepreneurship - Helper's Guide**

This guide is full of hands-on activities for group meetings of youth pursuing entrepreneurship. It includes extensive background on life skills, teaching using the Experiential Learning Model, background on entrepreneurship and answers to questions in the youth manual. Experiential activities are correlated to the national educational standards and benchmarks for middle and high school students.

WR Workforce Readiness—Grades 6-9

WR1 **Get in the Act! Take 1—Youth Guide + CD**

This program is designed to help middle school youth explore what it takes to get their first "paying" job. This interactive experience, combining CD and activity guide formats with activities presented in the context of a movie set, helps youth recognize their learning styles and personal qualities. Youth make "real life choices" using video scenarios in the on the job choices game. Youth discover how to assess job possibilities in the community and create job scenarios.

WRL **Get in the Act! Take 1—Helper's Guide + CD**

Helpers will enjoy using this guide with the CD to incorporate workforce skills in their work with youth. Activities reinforce and extend learning with emphasis on personal qualities, working with others, and thinking skills. Youth create their own work plan by applying what they learned to get that first job and attaining future career goals. All activities and skill areas support the national SCANS workforce skills and educational standards.

Resources

Experiential Learning

EXPL **Experiential Learning Video—Grades k-12**

EXPL **Heads-on, Hands-on:
The Power of Experiential Learning**

This training and teaching package—a facilitator’s guide, video/DVD and Website—uses experiential training design to illustrate how experiential learning takes place with real volunteers, children and youth.

FILM **4-H Filmmaking Workshop**

FILM **DVD of 4-H Filmmaking Workshop**, a compilation of 11 virtual workshop videos designed to teach users about video production and filmmaking. It is geared toward youth interested in making Science, Engineering, and Technology (SET) films. DVD for computer viewing only.

Cloverbuds

Cloverbud Curriculum Index

CB	Cloverbud Curriculum—Ages 5-8	
CBL1	Exploring Farm Animals Helper’s Guide—Grades K-3	page 3
CBL2	A Palette of Fun with Arts & Crafts Helper’s Guide, Grades K-6	page 12
CB1	Bicycle Adventures—Bicycling for Fun	page 10
CB2	Creepy Crawlies, Grades 3-5	page 3
CB3	Pre-Flight, Grades K-2	page 6
CB4	Theatre Arts 1—Play the Role—Acting, Grades K-2	page 13
CB5	Ohio State University Cloverbud Program Manual—Series I	
	Contains activities that can be used by adult volunteers to help Cloverbud youth gain self-understanding, social interaction skills, achievement, and positive attitudes. The activities enable adult volunteers to help youth relate to science and technology, expressive arts, health, the environment, personal development, citizenship, family science, consumerism, plants and animals.	
CB6	Ohio State University Cloverbud Program Manual—Series II	
	Same goals and objectives and the above.	

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