

4-H Library		
No.	Title	Description
01	4-H Officer Handbook	Helps 4-H club officers and committee members learn their responsibilities, prepare for their leadership roles, and make club meetings fun and interesting
01	4-H Family Handbook	Introduces new 4-H members and their families to opportunities that 4-H has to offer.
02	Exploring the Treasures of 4-H – Helper’s Guide	Designed for volunteer leaders with activities to help groups of youth explore the many treasures of 4-H
02	Exploring the Treasures of 4-H – Youth Guide	For youth to explore the joys of 4-H by discovering their interest, potential 4-H projects and finding 4-H where they live
03	Aerospace Adventures – Helper’s Guide	Guide to accompany the Aerospace Adventures curriculum. Answers the questions in the activity guides as well as provides facilitators with discussion points and questions for youth.
03	Aerospace Adventures 1 – Pre Flight	In Level 1 of Aerospace Adventures, youth build a marshmallow rocket, learn about different careers in aviation and space, and explore how an airplane works. 4 activities total. Grades 1-3.
03	Aerospace Adventures 2 – Lift Off	In Level 2 of Aerospace Adventures, youth build a straw rocket, learn about weather conditions, make a paper hot air balloon, and learn the International Phonetic Alphabet. 13 activities total. Grades 3-5.
03	Aerospace Adventures 3 – Reaching New Heights	In Level 3 of Aerospace Adventures, youth make a shuttle on a string, a Japanese kite, a hang glider, and learn about a control panel of an aircraft. 12 activities total. Grades 6-8.
03	Aerospace Adventures 4 – Pilot in Command	In Level 4 of Aerospace Adventures, youth create an altitude tracker, determine fuel efficiency for a commercial aircraft, explore pilot certification, evaluate navigation systems, and learn about airport issues. 12 activities total. Grades 9-12.
04	After School Agriculture - 1	This group activity guide for the after-school teacher will quickly engage youth in learn-by-doing agriculture activities within the following thematic units: All About Agriculture, Fast Food Agriculture, Mystery Agriculture, and Plant Detectives.
04	After School Agriculture - 2	This group activity guide for the after-school teacher provides ready-to-use lessons plans that will quickly involve youth in experiential activities related to the following thematic units: Agriculture Gone Wild, Farm Physics, Frontier Living, and Insect Invasion.
05	Amphibians & You – Leader’s Guide	Encourage youth in your community to discover native amphibians and their value to the ecosystem. Students will learn how to identify native amphibians and conduct field research. Youth will feel a sense of accomplishment and pride knowing that they are contributing data to local herpetologists that will aid in the conservation of these magnificent creatures. 41 pages. Age Level: 10 and up. Can be adapted for younger and older youth.
05	Amphibians & You – Student Journal	Age Level: 10 and up. Can be adapted for younger and older youth

06	Beef – Helper’s Guide	Selection, breed identification, parts identification, handling, grooming, showing, budgeting, identifying parasites, controlling fleas and spaying activities are featured.
06	Beef 1 – Bite into Beef	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.
06	Beef 2 – Here’s the Beef	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
06	Beef 3 – Leading the Charge	Selection and judging, feeds, careers, health, reproduction, and meats and marketing encourage more in depth learning.
06	Exploring Beef Health and Husbandry	This curriculum is designed as the guide for a project facilitator. The activities and background information in this curriculum will help youth develop the requisite knowledge and skills associated with raising and showing beef cattle. Activities are youth centered and include opportunities for the application of knowledge and skills at three different levels of experience: beginner, intermediate, and advanced.
07	Build You Future – Facilitator Guide	From exploring potential jobs to starting their own business, the “Build Your Future” curriculum helps teens develop skills and knowledge in career exploration. Participants experience a variety of learning methods including developing a business plan, competing in a quiz bowl, creating a portfolio, analyzing case studies, and discussing questions that reflect on their experiences. Grades 9-12
07	Build Your Future – Youth Notebook	(see description above)
08	Project Butterfly Wings – Leader Guide	Provides the leader with facilitator tips, activity guides, and additional resources for the Project Butterfly WINGS curriculum.
08	Project Butterfly Wings – Youth Guide	In Project Butterfly WINGS, youth explore the outdoors through guided inquiry, learn to identify the butterfly families and common butterflies, and contribute to science.
09	Bicycle – Helper’s Guide	The activities in the Helper's Guide are designed for group learning and may be used at any time with the Level 1 or Level 2 books. Groups will organize group rides, practice bicycle skills, and play fun bicycle games.
09	1 – Bicycling Fun	Beginning riders learn the essentials for getting started safely and successfully. There are 15 activities on topics such as wearing protective equipment, fitting a helmet, identifying bike parts, choosing and fitting a bike, braking, identifying traffic signs, locating road hazards, and planning a bicycle trip. Grades 3-5.
09	2 – Wheels in Motion	Youth learn advanced skills as they explore their surroundings. There are 15 activities on topics such as shopping for a bike, performing specialized repairs and maintenance activities, shifting gears, riding a bike safely at night or in bad weather, learning about good nutrition for cyclists, and becoming involved in advocacy for bicycling. Grades 6-8.

09	Don't get Stuck – Fix it DVD	This DVD showcases preventive maintenance and repair tips. Features eleven different segments from fitting a helmet to adjusting brakes; each segment is color coded so youth can quickly locate the segment needed.
10	Cat – Helper's Guide	Helpers will find the group activities in this guide an excellent way to involve everyone in learn-by-doing cat project sessions.
10	Cat 1 – Purr-fect Pals	Select a cat. Identify cat breeds. Name the parts of a cat. Handle and groom a cat. Care for its health. Create a budget. Grades 3-5
10	Cat 2 – Climbing Up	Learn about senses and sounds. Explore tricks to teach a cat. Traveling with a cat. Learn about feeding and emergency care. Detect signs of illness and health issues. Grades 6-8
10	Cat 3 – Leaping Forward	Explore veterinary procedures. Learn reproduction and cat body systems. Learn showmanship and cat behavior. Explore community laws and animal welfare. Grades 9-12
11	Cavy Resource Handbook	This resource handbook contains essential information for members taking a guinea pig project. Topics covered include general care, history, anatomy, selection, housing and equipment, records, nutrition, health, reproduction, show preparation, marketing, and care. This handbook is a valuable resource for every cavy enthusiast. Appropriate for all age and skill levels.
12	ChickQuest – Teacher's Guide	<p>What can we learn from a chick? This school enrichment program challenges youth to use science, technology, engineering, and math skills to investigate the life cycle of an embryonic chicken egg. From monitoring living eggs to observing fluffy chicks, these lively activities pique curiosity, encourage collaboration and communication, and provide young scientists with unforgettable experiences. Full-color poster of a chicken life cycle is included. A ChickQuest Logbook is required for each student.</p> <ul style="list-style-type: none"> · Appropriate for grades 3-5
12	ChickQuest – Log Book	<p>This 21-day classroom adventure starts with eggs and ends with chicks. Students are the scientists who help make it happen! This personal ChickQuest Logbook is used to record data and observations. For use with ChickQuest: The Scientific Journey through a Life Cycle (Teacher Guide).</p> <ul style="list-style-type: none"> · Appropriate for grades 3-5
13	STEAM Clothing – 1	In STEAM Clothing 1: FUNdamentals, youth will gather the tools they'll need to begin sewing, understand textiles through fun science experiments, learn beginning math and engineering techniques in clothing construction, and take their skills a step further, investigating businesses, service learning projects, and modeling.
14	STEAM Clothing – 2	In STEAM Clothing 2: Simply Sewing, youth will prepare for more advanced sewing techniques and projects, conduct more advanced textile science experiments, focus on

		advanced engineering techniques, add finishing touches and style to garments, and market and calculate prices of products.
15	STEAM Clothing – 3	In STEAM Clothing 3: A Stitch Further, youth will learn the advanced, couture techniques used by designers to create unique garments. Youth will take the science of textiles a step further, and learn to sew garments with challenging patterns and fabrics, couture sewing techniques, and how to sell your professional-looking garments and accessories.
16	STEAM Clothing – 4	In Maker's Guide to Sewing Stuff, youth will use the skills learned in STEAM Clothing 1 & 2 to make stuff! Youth will create items to use and wear while they practice their beginning sewing skills. Activities in this manual are for beginning and intermediate sewers looking to improve their skills before progressing into using patterns to make garments.
17	STEAM Clothing – 5	In Beyond the Needle, youth will learn all about the 'A' in STEAM Clothing -- the Art! This youth manual includes activities for three skill levels: beginner, intermediate, and advanced. Youth will learn the design basics and create a portfolio to exhibit samples made to practice specific techniques. Then, youth will be able to create their own fabulous embellishments and treatments on garments. If you love art, then this STEAM Clothing manual is for you!
18	Sewing – Helper's Guide	This book is the Helper's Guide of the 4-H Sewing Curriculum. This curriculum set, written by university experts, include activities for young people to develop and share their creative abilities in the sewing and textiles area.
18	Level 1 – Under Construction	Youth will learn more about fashion and their unique style as well as technology in sewing and careers in the textile industry.
18	Level 2 – Fashion Forward	Will help youth develop their fashion sense and the skills needed to create a unique style of their own.
18	Level 3 – Refine Design	Youth will learn about fashion and their unique style as well as technology in sewing and careers in the textile industry.
19	Cloverbuds	This revised classic includes updated versions of hundreds of activities for 4-H Cloverbuds (ages 5-8; grades K-2) in the following topics areas: science and technology, communications/expressive arts, healthy lifestyle, environmental/earth science, personal development, citizenship/civic education, consumerism and family science, and plants and animals.
19	Exploring 4-H	Made especially for the Cloverbud age range (ages 5-8)! Exploring 4-H comes with an 8-page activity booklet and a 20-page coloring book! Exploring 4-H includes three (3) simple introductory activities for our youngest 4-H members. Youth gain an understanding of 4-H and the types of projects they can do as a 4-H member. This activity is designed to be completed with the assistance of a caring adult.
19	All About Pets	All About Pets includes four (4) simple introductory activities for our youngest 4-H members. Youth learn about different types of pets, how to choose a pet, and how to care for a pet. This activity is designed to be completed with the assistance

		of a caring adult. While this activity is perfect for groups, we recommend that each youth have his or her own activity booklet.
19	All About Insects	All About Insects includes three (3) simple introductory activities for our youngest 4-H members. Youth learn the basics of insects and then search for insect clues and insects outside. This activity is designed to be completed with the assistance of a caring adult. While this activity is perfect for groups, we recommend that each youth have his or her own activity booklet.
19	Create Your Own Marshmallow Rocket	Create Your Own Marshmallow Rocket includes four introductory activities for our Cloverbud 4-H members (ages 5-8) and comes with an 8-page activity booklet where they learn about the basics of rockets and astronauts and building a model rocket out of marshmallows. This activity is designed to be completed with the assistance of a caring adult.
20	4-H Cooking – Helper's Guide	Provides the best practices for a 4-H cooking club, learning objectives for cooking projects, and additional activities.
20	4-H Cooking – 101	Among other topics, youth learn how to use MyPlate, avoid spreading germs while cooking, measure and mix ingredients, test baked goods for doneness, brown meat, and set the table for a family meal.
20	4-H Cooking – 201	Topics include understanding and preventing foodborne illnesses, thawing frozen foods, proper knife techniques, how to read Nutrition Facts labels, and how to make soups, rice, pasta, and other foods.
20	4-H Cooking – 301	Youth practice making bread, grilling meats, vegetables, and fruit, and making butter. Youth learn about yeast, gluten, and different types of fats.
20	4-H Cooking – 401	Youth learn about herbs and spices and how to make ethnic foods. Youth also practice making cakes, candy, pastries, and pies.
21	Communications Curriculum – Module 1	Topics in this book include communication preferences, active listening, identifying aggressive communication, using visual aids, making introductions, and writing letters and songs. Grades 3-5 and written as a facilitator guide
21	Communications Curriculum – Module 2	Topics in this book include conflict resolution, online communications and social media, cultural differences in communication, writing thank you notes, press releases, and speeches, and careers in communications. Grades 6-8 and written as a facilitator guide
21	Communications Curriculum – Module 3	Topics in this book include understanding interpersonal electronic communication usage, evaluating advertisements, writing resumes and cover letters, safety in online communication, leadership and teamwork, and digital storytelling. Grades 9-12 and written as a facilitator guide
22	Computer Science & Programming through Scratch– Facilitator Guide	Youth interact with a series of tutorials and challenges within the Scratch environment. Young people can work on the activities individually, with partners, or in a guided instructional setting. This facilitator guide further explains the activities introduced in the youth guide. It suggests many "unplugged" activities. It also includes discussion questions,

		previews of skills and blocks introduced, and hints or suggestions to help youth better understand each activity and concept. Grades 6-8.
22	Computer Science & Programming through Scratch– Level 1 Fundamentals	Youth interact with a series of tutorials and challenges within the Scratch environment. Young people can work on the activities individually, with partners, or in a guided instructional setting. Grades 6-8.
22	Computer Science & Programming through Scratch– Level 2 Explorations	Delves deeper into important principles of computer science such as generalization and modularity, and introduces some additional features of Scratch such as clones and lists. Going through this book should strengthen youth’s programming skills, help them write better programs, and provide interesting ideas for further exploration. Grades 6-8.
22	Computer Science & Programming through Scratch– Level 3 Recursion	Focuses on an interesting, powerful, and important technique from computer science called recursion. A recursive program is one which "calls itself". In Scratch, this means using a block for the script within the very script that defines the block. Recursion makes solving many problems easier, and also allows one to do some things that would be very difficult to do without it, such as drawing intricate fractals. We hope you find the projects in this book interesting, illuminating, and, most of all, fun! And, that the projects inspire you to go on to further study of topics in computer science. Grades 6-8
23	Consumer Savvy – Helper’s Guide	Supplemental materials that help volunteers facilitate learning situations for various ages of youth. Numerous group activities are included to help youth develop essential life skills as they pursue interest in consumer education.
23	Consumer Savvy Level 1 – The Consumer in Me	Youth will experience what it means to be a consumer through saving, spending and sharing.
23	Consumer Savvy Level 2 – Consumer Wise	Become a savvy consumer! Practice decision making, learn about advertising, and understand how to be a smart shopper online.
23	Consumer Savvy Level 3 – Consumer Roadmap	Youth will about the global economy, your rights and responsibilities as a consumer, and how to gather information about the cost of living on your own.
24	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!
24	Dairy 1 – Cowabungal!	Youth explore dairy cattle breeds, select calves, identify body parts, cost of raising cattle, how to care for your dairy animals and much more.
24	Dairy 2 – Mooving Ahead	Develop skill sets that pertain to health and disease, opportunities available in animal and dairy careers, practice communication, acquiring and evaluating data and more.
24	Dairy 3 – Rising to the Top	Advanced youth practice body condition scoring, selecting through records, mastitis detection, balancing a ration, pregnancy detection, delivery of calf, promoting dairy products and exploring career opportunities.
25 A	Dairy Goat – Helper’s Guide	Youth will enjoy playing goat related games, conducting skillathons, giving demonstrations, participating in showmanship contests and experiencing many other fun and educational group activities.

25 A	Dairy Goat – Level 1 Getting Your Goat	Whether youth own a dairy goat or are just curious about them, these activities provide enjoyable, hands-on experiences to introduce them to goats. Selection, feeding, management, fitting, showing and responsible goat ownership are emphasized.
25 A	Dairy Goat – Level 2 Stepping Out	Youth explore how to keep their goats healthy, feed them for maximum production, prepare for kidding, develop judging skills, milk a goat properly, and much more. Exciting activities for teams and individuals are included.
25 A	Dairy Goat – Level 3 Showing the Way	Experienced goat project youth will find these activities challenging and fun as they delve into genetics, careers, national industry issues, diseases, biosecurity, body condition scoring, linear appraisal, breeding programs, pedigrees, dystocia, quality assurance, and leadership opportunities.
25 B	Meat Goat – Helper's Guide	Guide is packed with activities that involve the entire group. Youth will enjoy planning a program, completing project records, developing management calendar, completing meat quality assurance program and participating in quizzes.
25 B	Meat Goat – Level 1 Just Browsing	Youth plan a program, complete project records, develop a management calendar, complete a meat quality assurance program, participate in a quiz bowl, skillathon and tour, give a presentation and explore goat related careers.
25 B	Meat Goat – Level 2 Growing with Meat Goats	Youth actively explore goat diseases, identify poisonous plants, determine body condition, learn about goat reproduction and kidding, and learn proper animal husbandry. Grades 6-8.
25 B	Meat Goat – Level 3 Meating the Future	Discover how to control parasites, practice bio-security, conduct judging clinic, judge goats, give oral reasons, select sires, balance ration, compare forage samples, practice sound ethics, prevent diseases. 40 pages. Grades 9-12.
26	Dog Resource Handbook	This resource handbook contains essential information for members taking a dog project and includes everything from selecting a dog that's right for you, proper care, training techniques, dog anatomy, competition, and much more. Purchase it just once and use it for several years. - Appropriate for all age and skill levels
26	Dog – Helper's Guide	Adult helper's can use this to guide youth as they explore: dog web resources, breed origins, safety, locating a missing dog, socializing a dog, showmanship, tricks, health, feeding and controlling parasites.
26	Dog 1 – Wiggles and Wags	Activities relate to 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. Age: Grades 3-5, but may be used by youth in any grade based on their project skills and experience.
26	Dog 2 – Canine Connection	Activities relate to selection and care, health and nutrition, behavior and training, and fitting and showing. Age: Grades 6-8, but may be used by youth in any grade based on their project skills and experience.
26	Dog 3 – Leading the Pack	Recommended for use with a project helper, facilitator, or

		parent. Levels 1 and 2 are recommended as prerequisites, depending on age and experience. Target Age: Grades 9-12, but may be used by youth in any grade based on their project skills and experience.
27	Electric – Group Helper’s Guide	This helper's guide has a number of exciting group activities that will keep members coming back for more. It includes a variety of group activities that can be organized quickly and conducted with 3 to 15 youth in a group.
27	Electric 1 – Magic of Electricity	Youth explore why certain things insulate from electricity better than others and the effect that magnetism has various substances. They also build a flashlight, a compass, an electromagnet, and an electric motor. Grades 4-5.
27	Electric 2 – Investigating Electricity	Youth build circuits and test voltages, build a rocket launcher, and build a burglar alarm as they practice decision making and communication. This unit is designed for youth who understand magnetism, electron flow, and circuit design. Grades 6-7.
27	Electric 3 – Wired for Power	Youth build on skills learned in Levels 1 and 2 plus learn how to measure electrical usage, replace electrical switches, and determine electrical loads. Youth will also evaluate different light bulbs and test for electrical power. Grades 8-9.
27	Entering Electronics	This unit introduces the basics of solid-state electronics and provides hands-on activities for practical experience in understanding modern day electronic equipment. This unit is for the intermediate to advanced learner. Grades 10-12.
28	Entomology – Facilitator’s Guide Teaming with Insects	Facilitator’s Guide to support Entomology Teaming with Insects series, Levels 1 through 3.
28	Entomology 1 – Teaming with Insects	Level 1 introduces the world of insects. Activities focus on how they look and move and provide some background for studying important entomology topics.
28	Entomology 2 – Teaming with Insects	Level 2 shows how to make insect collection tools, and expands on the basic concepts of biodiversity, invasive species, integrated pest management, and forensic entomology.
28	Entomology 3 – Teaming with Insects	Level 3 delves even deeper into the basic concepts and encourages youth to take control of their learning by doing their own research using the scientific method and reference materials.
29	Entrepreneurship – Helper’s Guide	Includes extensive background on life skills, teaching using Experiential Learning Model, background on entrepreneurship & answers to questions in youth manual. Experiential activities correlated to national educational standards.
29	Entrepreneurship – Activity Guide	Youth discover the world of entrepreneurship with this multi-level guide. Activities assist youth in learning what it takes to be an entrepreneur. Youth practice the skills needed to function successfully as an entrepreneur and explore types of businesses, products and pricing, marketing, partnership, agreements and contracts. Youth create a business plan and start their own business.
30	EntrepreneurShip: ESI Leader’s Guide	This comprehensive guide accompanies ESI Units 1-3. It describes the activity, provides answers to questions,

		provides a list of supplies needed for each activity, shows the National and State Education Standards, and describes the success indicator for each lesson.
30	EntrepreneurShip: Unit 1 Discover the E-Scene Grades 6 and up	Discovery is what ESI: Unit 1 is all about! Youth will learn about entrepreneurship by investigating businesses in their communities. They will discover the traits of an entrepreneur and take a skills test to see if they have these entrepreneurial traits. Other activities include: investigating entrepreneurs in youths' families, exploring potential business ideas, and reading stories of other entrepreneurs.
30	EntrepreneurShip: Unit 2 The Case of Me Grades 6 and up	The entrepreneurship curriculum continues with ESI Unit 2: The Case of ME. Youth will explore the core values of their business and learn how to give back to the community. Time management skills, ethics and legal considerations, professionalism, and relationship building are all themes within Unit 2.
30	EntrepreneurShip: Unit 3 Your Business Inspection	Once the foundation is in place, ESI: Unit 3 continues youths' entrepreneurial journeys with the "nuts and bolts" of starting a business. Youth create a Business Plan and plan a marketing strategy. Youth also utilize the internet to promote their product or service to reach a broader audience.
31	Exploring Your Environment – Facilitator Guide	Provides training, supplemental activities, and resources to help the facilitator deliver the Exploring Your Environment curriculum. Grades 6-8.
31	Exploring Your Environment – Ecosystem Services	Provides an introduction to ecosystem services and explores topics including pollination, soil, provisioning services, and ecotourism. Grades 6-8.
31	Exploring Your Environment – Earth's Capacity	Exploring Your Environment - Earth's Capacity focuses on environmental stewardship and sustainability and issues such as transportation choices, waste management, composting, recycling, and natural resources. Grades 6-8.
32	Fishing – 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. Grades 3-8.
32	Fishing 1 – Take the Bait	Youth have fun tying knots, casting to a target, rigging various lines, selecting tackle, identifying where fish are, using different baits & lures, identifying fish, and identifying internal & external fish parts. Grades: 3-5
32	Fishing 2 – Reel in the Fun	Youth 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. Grades: 7-9
32	Fishing 3 – Cast into the Future	Youth develop their leadership and fishing skills as they 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. Grades 9-12.
33	Food, Culture & Reading A Facilitators Guide Grades 4-6	Through experiential activities, youth will be able to recognize a variety of healthful foods, taste new foods from other cultures, explore the similarities of food, and develop an

		understanding and appreciation of cultures that are different than their own.
34	Fantastic Foods – Helper’s Guide	Provides facilitator with some additional background and some tips on helping youth through the activities in their guides.
34	Fantastic Foods A – Six Easy Bites	Learn what is good to eat and how to fix simple foods. Fix pizza, pancakes, fruit kabobs and granola bars. Explore why calcium is important to our bodies. Understand TV commercial messages about food. Grades 3-4
34	Fantastic Foods B – Tasty Tidbits	Make main dishes, e.g., meatballs, pasta and salads. Learn to make basic muffins and biscuits. Learn to change recipes. Reduce fat content in recipes. Discover how to store fruit and vegetables. Grades 5-6
34	Fantastic Foods C – You’re the Chef	Learn to evaluate nutrition information and fad diets. Develop your own exercise program. Learn how to cook different cuts of meat. Learn to divide large-quantity packages for family use. Make baked chicken, breadsticks and stir-fried vegetables. Grades 7-9
34	Fantastic Foods D – Food Works	Learn how to make jelly, bake fish and marinate meat. Conduct a food activity with young children. Learn to divide recipes and make substitutions. Plan menus on a budget. Grades 10-12
35	Food Science: What’s on Your Plate?	What’s on Your Plate? Exploring Food Science is a comprehensive curriculum set with hands-on experiments – some of which learners can eat as they discover the science behind food preparation. Curriculum includes four Youth Science Journals and Four Facilitator Guides complete with step-by-step instructions: The Secrets of Baking, The Power of Protein Energy, The Inner Mysteries of Fruits and Vegetables, Be a Food Scientist
36	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. Grades 3-12.
36	Forestry 1 – Follow the Path	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. Grades 3-5.
36	Forestry 2 – Reach for the Canopy	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. Grades 4-6.
36	Forestry 3 – Explore the Deep Woods	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. Grades 7-12.
37	Gardening – Helper’s Guide	Helper's Guide to accompany all levels of the 2016 Gardening curriculum.
37	Gardening – See them Sprout	Recently revised! Youth learn how to plan an in-ground or container garden; how to prepare the soil; and when, where, and what to plant. Level A introduces basic plant science,

		garden friends and foes, tool safety, using the vegetable harvest, and horticulture-related careers. Youth "learn by doing" in 12 fun activities that include germinating seeds, growing a super-sized pumpkin, experiments with plant parts, and visiting a grocery store to explore vegetables and vegetable products. Grades 3-4
37	Gardening – Let's Get Growing	Recently revised! Youth learn how to modify their garden plans. Other topics include seed varieties and cultivars, starting seeds indoors, using transplants, and composting. Level B also introduces integrated pest management. Science topics include plant families, how plants respond to light, and how to grow new plants from plant parts. Youth "learn by doing" in 12 fun activities that include building a plant maze, making a worm box, judging vegetables, and composting. Grades 5-6
37	Gardening – Take Your Pick	Recently revised! Youth learn different planting methods, how to improve soil, and how to extend the growing season. They explore photosynthesis, hybrid vs. standard forms, herb gardening and preservation, plant companions, and storing and saving seeds. Level C also includes how to identify and prevent weeds, insect damage, and animal pests. Youth "learn by doing" in 18 fun activities that include cross-pollinating flowers, making an acid/base indicator, producing a chromatogram, and helping others in garden projects. Grades 7-9
37	Gardening – Growing Profits	Recently revised! Youth learn different planting methods, how to improve soil, and how to extend the growing season. They explore photosynthesis, hybrid vs. standard forms, herb gardening and preservation, plant companions, and storing and saving seeds. Level C also includes how to identify and prevent weeds, insect damage, and animal pests. Youth "learn by doing" in 18 fun activities that include cross-pollinating flowers, making an acid/base indicator, producing a chromatogram, and helping others in garden projects. Grades 10-12
37	Gardening - Suggested 4-H Garden Exhibits	Recently revised! What do you exhibit? This publication provides examples and ideas on what to exhibit for 4-H garden projects. The publication includes some "do's and don'ts" for exhibiting vegetables as well as standards for preparing vegetables garden exhibits. Grades 3-12
38	Health – First Aid in Action	Youth learn the importance of first aid as well as techniques for taking care of cuts and scrapes, nosebleeds, stings, burns and other concerns.
38	Health – Staying Healthy	Health Project Activities for Youth
38	Health – Keeping Fit	Fitness Activities for Youth
39	Horse – Helper's Guide	This is a revised (2015) edition of the traditional 4-H Horse curriculum! It contains the same titles as the first set of Horse books, but with new content and improved ease of use. The Helper's Guide will assist you in getting everyone involved at

		group meetings using any of the 17 featured group activities.
39	Horse Curriculum Level 1 – Giddy Up & Go	Level 1: Giddy Up and Go is perfect for youth who may or may not have a horse or pony of their own but want to learn about horses. They will learn the basics of horse behavior, breeds, and safety around horses through a variety of activities, including teaching others.
39	Horse Curriculum Level 2 – Head, Heart & Hooves	Level 2: Head, Heart, and Hooves, youth will learn more about acquiring and raising a horse including selecting a horse, horse nutrition and care, equine teeth and bones, judging, including giving oral reasons and much more.
39	Horse Curriculum Level 3 – Stable Relationships	Level 3: Stable Relationships encourages youth to explore horse diseases and health care, pasture management, providing appropriate shelter and building a financial plan.
39	Horse Curriculum Level 4 – Riding the Range	Level 4: Riding the Range teaches youth nine basic riding skills and ten horsemanship skills, training techniques, trail riding and selection and use of tack.
39	Horse Curriculum Level 5 – Jumping to New Heights	Level 5: Jumping to New Heights, youth learn more advanced riding skills, the Quarter System, horse showmanship, ethics and leadership.
39	4-H Horse Program: Horses & Horsemanship	A practical and thorough guide to horses that covers breeds, judging, showing, western horsemanship, grooming, training, equipment, & safety.
39	4-H Horse Program: Horse Science	In depth scientific examination of horses that covers horse behavior, anatomy, reproduction, feed nutrients, health & sanitation, disease, and parasites and much more.
40	¡Qué Rico! La Cultura (Latino Cultural Arts)	Through a series of activities, this guide teaches youth about many aspects of Latino culture. Lessons include performing arts, visual arts, textile arts, and celebrations. Presented in both English and Spanish. Activities are designed for youth from kindergarten through eighth grade.
41	Let's Bake Quick Breads	Learn how and why quick bread recipes are so tasty as you bake your way through updated activities. See what makes a wheat kernel tick and learn how the quick bread ingredients react with one another. You'll also explore careers in the kitchen, and learn how to alter a recipe for more healthful benefits. Includes gluten-free recipes.
42	(Rope) Not Just Knots	Learn to make fourteen different simple knots, bends, and hitches. Remember what they say— practice, practice, practice! Then show what you have learned with a capstone project of your choosing.
43	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.
43	Hiking Trails – Level 1	Hiking Trails includes shelter selection, Leave No Trace camping skills, outdoor cooking and environmental awareness and appreciation. Grades 3-5.
43	Camping Adventures – Level 2	Focuses on hiking for a day. Learn about clothing needs, packing a daypack, reading topographic maps, and orienteering skills.

43	Backpacking Expeditions – Level 3	Focuses on being on the trail for extended periods of time. It includes clothing needs; tent setup; using backcountry stoves; basic nutrition; menu planning for multi-day hikes; personal hygiene & basic first aid.
44	Personal Finance – Helper’s Guide	In this National 4-H Curriculum, youth will learn ways to use and save money, the benefits and drawbacks of credit, consumer decision making, how to select financial services, and more. Provides training, supplemental activities, and resources to help youth learn how to be good caretakers of their money and apply those skills to other areas of their lives.
44	Money Fun-damentals – Book 1	The activities in this action-packed guide invite youth to develop a money personality profile and style, explain needs and wants, deal with money decisions, set financial goals and develop a money plan. Grades 7-9.
44	Money Moves – Book 2	Youth learn to predict outcomes and analyze their finances. Calculate interest, determine the cost of credit, a checking account, select financial services, make marketplace decisions & the 11 ways of handling money. Grades 9-12.
45	Pet – Helper’s Guide	Project helpers will find many fun and engaging group games and activities to further expand the pet project experience for youth.
45	Pet Pals – Level 1	Features 14 activities including pet selection, body part identification, pet art, communications, handling, housing and daily needs.
45	(Pet) Scurrying Ahead – Level 2	Develop planning and decision-making skills, learning exhibiting, debate pet sayings, create a story, observe pet behavior, promote a product and learn how to feed and care for your pet.
45	(Pet) Scaling the Heights – Level 3	Explore genetics, pet issues, reproduction, caring for newborns, starting your own business, and careers.
46	Photography Basics – Book 1	Photography curriculum. Level 1, Photography Basics, is a beginning level book for the study of photography. Activities cover four main areas: Equipment, Lighting, Composition, and Skill Building. Topics include flash, black & white photography, and taking selfies! Having access to a camera (phone or DSLR) is essential, as well as deciding how and where to store the photos taken during the project. This book will give youth the tools to succeed at and enjoy their photography journey.
46	Photography Next Level – Book 2	Photography curriculum. Level 2, Next Level Photography, is an intermediate level book for a serious study of photography. Activities build on the four main areas from Level 1 (Equipment, Lighting, Composition, and Skill Building) and include topics such as the Rule of Thirds, Selecting a Lens, and Panorama. Having access to a camera (phone or DSLR) is essential, as well as deciding how and where to store the photos taken during the project.
46	Photography Mastering Book 3	Photography curriculum. Level 3, Mastering Photography, is an advanced level book for a serious study of photography. Activities build on the four main areas from Levels 1 and 2 (Equipment, Lighting, Composition, and Skill

		Building) and include topics such as Smartphone Exposure Tips, Low Light Challenges, and Studio Portraits. Having access to a camera (phone or DSLR) is essential, as well as deciding how and where to store the photos taken during the project.
47	Poultry – Helper’s Guide	Project helpers will find many fun and engaging group games and activities to further expand the Poultry project experience for youth.
47	Poultry 1 – Scratching the Surface	Activities include parts identification, species and breeds, selection, exploring an egg, feather features, cooking eggs, feeding, handling, washing and showing.
47	Poultry 2 – Testing Your Wings	Covers budgeting, pecking order, feed tags, retail products, bone identification, carcass grading, health care and egg exploration.
47	Poultry 3 – Flocking Together	Plan a judging clinic, manage a flock, exploring careers, processing chickens, conducting poultry games and discuss values and ethics.
48	Poultry and More	Additional resources for poultry enthusiasts on: Bantams, Chicken Breeds and Varieties, Poultry for Fun and Food, From Egg to Chick, Small Turkey Flock Management, Raising Waterfowl and Pigeons
49	The Power of the Wind – Facilitator’s Guide	Are you looking for something to spark engineering and science interest among middle school kids? The activities in The Power of the Wind curriculum involve young people in the engineering design process as they learn about the wind and its uses.
49	The Power of the Wind – Youth Guide	Youth work with members of a team to design, create, build, and test a wind powered device. Time Required to Complete the Activities in the Youth Guide: Around 12 hours, depending on how much time is allowed for discussion and reflection. The final "What Innovative Design Can You Create" project could require several additional hours.
50	Freezing Project Manual	Youth learn how to safely freeze foods and maintain quality, and how to use the frozen foods they prepared in healthy recipes. The manual includes nutrition information, kitchen basics, the basics of the preservation procedure, and activities for the youth to conduct to learn the techniques. Activities include freezing fruit and vegetables, conducting a taste test, and creating a freezer inventory. Grades 3-12
50	Drying Project Manual	Youth learn how to safely dry foods and maintain quality, and how to use the foods they dried in healthy recipes. The manual includes nutrition information, kitchen basics, the basics of the preservation procedure, and activities for the youth to conduct to learn the techniques. Activities include drying fruits and herbs, making fruit leathers, and making a menu plan. Grades 3-12
50	Boiling Water Canning Project Manual	Youth learn how to safely preserve fruits, tomatoes, fruit spreads, and pickles, and how to use these home-canned foods in healthy recipes. The manual includes nutrition information, kitchen basics, the basics of the preservation procedure, and activities for the youth to conduct to learn the

		techniques. Activities include canning fruit, making syrup, jams and jellies, and making pickles. Grades 3-12
50	Pressure Canning Project Manual	Youth learn how to safely preserve tomatoes, vegetables, and meats, and how to use these home-canned foods in healthy recipes. The manual includes nutrition information, kitchen basics, the basics of the preservation procedure, and activities for the youth to conduct to learn the techniques. Activities include canning vegetables, beans, and combinations of meat and vegetables. Grades 9-12
51	Rabbits – Helper’s Guide	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. (40 pages) Grades 3-12.
51	Rabbits 1 – What’s Hopping	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. (40 pages) Grades 3-5.
51	Rabbits 2 – Making Tracks	Youth will recognize body types, judge and show rabbits, tattoo a rabbit, keep records, identify diseases, administer medication, record growth rates, and market products. (40 pages) Grades 6-8.
51	Rabbits 3 – All Ears	Older youth will develop a breeding program, design a rabbitry, cull based on production, prevent diseases, develop sportsmanship and develop a marketing plan. (40 pages) Grades 9-12.
52	Robotics Level 1 – Give Robots a Hand	In Level 1 - Give Robots a Hand, youth explore and learn about robot arms. Concepts covered include pneumatics, arm designs, and three-dimensional space. Big ideas include form and function, scientific habits of mind, and engineering design. Grades 4-12. (79 pages)
52	Robotics Level 2 – Robots on the Move	In Level 2 - Robots on the Move, youth learn about locomotion through exploring, designing, and building mobile robot ROVs and other subsystems. Youth learn about friction, electronic circuits, mobile robots, simple machines, and buoyancy. Grades 4-12. (77 pages)
52	Robotics Level 3 – Mechatronics	In Level 3 - Mechatronics, youth will explore sensors and analog and digital systems. The track introduces simple electronic components; youth will build basic circuits to see how the components work. They will investigate basic elements of programming and instructions for robotic computer control. Grades 4-12. (109 pages)
53	Robotics – Youth Robotics Notebook	There is one Robotics Notebook for the three levels of the Junk Drawer Robotics curriculum. The notebook encourages youth to think and act like scientists and engineers. In their notebook, youth will record their ideas, collect data, draw designs, and reflect on their experiences. It also provides specific information for the challenges. Each youth should have his or her own Robotics Notebook. Grades 4-12. (91 pages)
54	Science Fun with Kitchen Chemistry	Join the Terrestrial Alien Defense Academy and figure out how to outsmart the aliens by doing experiments in your kitchen. Learn about what matter is and how it changes form; explore the different properties of matter; find out about acids

		and bases; and discover how everyday items and kitchen ingredients can be used in cool tests! Designed for beginners, but appropriate for all levels. Curriculum authored by The Ohio State University. Grades 3-12.
55	Science Fun with PHYSICS	Let your inner scientist come out and uncover the mysteries of physics at play in daily life. The amazing magician Franco Newtoni guides you through this project. As you try each experiment you'll see the forces of nature, energy, and the power of physics at work—or is it magic? Designed for beginners, but appropriate for all levels.
56	Service Learning – Helper's Guide	Guide to accompany the Service Learning Curriculum
56	Service Learning 1 – Agents of Change!	Learn to give back to your community. Reflect on your experiences. Identify community needs. Plan a service project and execute the idea. Grades 5-8
56	Service Learning 2 – Raise Your Voice	Plan and implement your own project. Share your project plan and outcome with others. Conduct an evaluation of your project. Grades 9-12
56	Citizenship Guide's Handbook	Guide to accompany the Active Citizenship Curriculum for Youth
56	Citizenship – Adventure Kit	Discover and discuss public issues. Plan a project to change or improve your community. Grades 4-12
57	Sheep – Helper's Guide	Helpers will enjoy involving youth in sheep instructions for skillathons, bingo, pyramid, developing management calendars and many more activities.
57	Sheep 1 – Rams Lambs & You	In Sheep 1, Rams, Lambs & You – youth will learn how to select a project lamb, properly care for the animal, and prepare the animal for show. Youth will also learn about sheep products and byproducts. Grades 3-4
57	Sheep 2 – Shear Delight	In Sheep 2, youth will practice presenting oral reasons, determine yield grades, compare digestive systems, explore a feed tag, practice management practices, and deliver a lamb. Grades 5-7
57	Sheep 3 – Leading the Flock	In Sheep 3, youth learn about judging, genetics and breeding, marketing a sheep product, and career paths. Grades 6-9
58	Small Engines – Helper's Guide	The Helper's Guide includes group activities, helpful hints for each activity in the three youth guides, and additional small engine project meeting ideas.
58	Small Engines 1 – Crank it Up!	Youth learn about engine parts, engine maintenance, oil grades, spark plugs, cooling systems, and safety labels. Grades 3-12
58	Small Engines 2 – Warm it Up!	Youth explore internal parts of engines, learn about engine sizes, compression ratios, seasoning their engines, and safety issues. Youth also learn occupational possibilities and about starting their own business. Grades 3-12
58	Small Engines 3 – Tune it Up!	Youth tear down and rebuild an engine, use diagnostic tools, research rules and regulations about using small engine machines, and select replacement engines. Grades 3-12
59	STEPS to a Healthy Teen – Facilitator's Guide	Each activity includes a Teen Research (TR) Challenge take-home task. The TR Challenge encourages healthier lifestyles through thought-provoking activities for teens to solve

		<p>themselves or with their families.</p> <p>It is strongly recommended to combine the Facilitator Guide with the Youth Notebook to provide full access to all curriculum content.</p>
59	STEPS to a Healthy Teen – Youth Notebook	The National 4-H Curriculum, STEPS to a Healthy Teen: Segments To Emphasize Physical activity and nutrition Steps, consists of 10 activities for youth ages 14 to 19.
60	Swine – Helper’s Guide	Packed with activities to involve the entire group. Youth will plan a program, complete project records, develop a management calendar, explore the pork quality assurance program & investigate character education.
60	Swine 1 – The Incredible Pig	Activities include 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. Grades 3-5
60	Swine 2 – Putting the Oink in Pig	Activities in Swine 2 include managing baby pigs, balancing a ration, exploring swine diseases, preparing pork, discovering swine careers and packing a show box. Grades 6-8
60	Swine 3 – Going Whole Hog	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!
60	Exploring Swine Health and Husbandry	This curriculum is designed as a guide for the project facilitator. The activities and background information in this curriculum will help youth develop the requisite knowledge and skills associated with raising and showing swine. Activities are youth centered and include opportunities for the application of knowledge and skills at three different levels of experience: beginner, intermediate, and advanced.
61	Theatre Arts: Imagination in Action	Theatre Arts Journal designed for youth to jot down ideas and craft projects as directed by the Theatre Arts books.
61	Theatre Arts: Level 1 Beginner Level 2 Intermediate Level 3 Advanced	This curriculum opens the world of theatre to youth with exciting activities at the beginner, intermediate, and advanced levels, this revised 4-H curriculum will help youth understand the power of non-verbal communication, improvisation, pantomime, script writing, cultural and historical influences, stage design, and costume design. Life skills and workforce development concepts are woven throughout the curriculum, as youth master more sophisticated theatre techniques and ideas.
62	Veterinary Science – Helper’s Guide	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.
62	Veterinary Science 1 – From Airdales to Zebras	Introduces youth to the normal animal, basic anatomy and systems, elementary principles of disease and careers with animals.
62	Veterinary Science 2 – All Systems Go!	This guide involves youth in in-depth investigation of normal and abnormal systems, preparation for college and exploration of the diversity of the veterinary profession.

62	Veterinary Science 3 – On the Cutting Edge	Youth who engage in this curriculum will develop diverse interests in animal and veterinary careers: become knowledgeable and responsible animal caregivers; develop experience-based science skill sets that pertain to health and disease etc.
63	Elements and Principles of Design Card	Learn the Elements and Principles of Design in Art with this handy, front-and-back card!
63	Get Started in Art	Explore the basic elements of visual art through activities on color, line, space, balance, and more, and then complete your own work of art. This project can be repeated as long as new learning takes place and new works of art are completed
63	Sketchbook Crossroads	Sketchbook Crossroads features three units for you to explore - Drawing, Fiber Arts, and Sculpture - and contains 23 step-by-step activities in total, including Perspective Drawing, Inkle Loom Weaving, and Sculpting with Cardboard. This 72-page guide is a great introductory tool for new artists while also providing new challenges for the more experienced youth.
63	Portfolio Pathways	Portfolio Pathways features three units for you to explore - Painting, Printing, and Graphic Design - and contains 25 step-by-step activities in total, including Painting a Self-Portrait, Plexiglas Etching, and Typography. This 76-page guide is a great introductory tool for new artists while also providing new challenges for the more experienced youth.
64	There's No New Water!	<p>This water conservation and water quality curriculum is grounded in a simple yet powerful concept that water is a finite natural resource whose quantity and quality must be responsibly preserved, protected, used, and reused.</p> <p>The curriculum includes six sequential learning modules and is intended for delivery in out-of-school group settings to be facilitated by an adult. (155 pages)</p>
65	Woodworking Wonders – 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. A number of ideas for additional woodworking activities are included.
65	Woodworking 1 – Measuring Up	Youth will develop skills that woodworkers 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. Grades 2-4.
65	Woodworking 2 – Making the Cut	Youth will measure, cut, sand, drill, use advanced hand and power tools, apply finish, and use bolts and staples. Grades 4 - 6.
65	Woodworking 3 - Nailing It Together	Youth will practice measuring angles, cutting dado and rabbet joints, using saws, and smoothing lumber with a hand planer. Grades 6 - 8.
65	Woodworking 4 – Finishing Up	Youth will learn specific woodworking skills including 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. Grades 9 - 12.

66	Mentor Guide For Grades K-5	This guide provides the mentor with ideas and suggestions for working with youth as they follow the activities in the Grades 3-5 workbook or the K-2 activities. The K-2 activities are mentor driven and are only available in this mentor guide. The student workbook for grades 3-5 is Level 1: My Leadership Workbook (item 07905). This book is designed for the Facilitator and is 72 pages.
66	Mentor guide For Grades 6-12	This mentor guide accompanies <i>My Leadership Journal</i> and <i>My Leadership Portfolio</i> , aimed at youth in grades 6-12. Activities are printed in the guide with additional mentor tips and suggestions. This guide provides helpful background information on working with youth in leadership development. In addition, the mentor can learn more about their own leadership skills by using the leadership assessment tool. 76 pages. This guide is for the Facilitator.
66	My Leadership Workbook For Grades 3-5	Youth 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.
66	My Leadership Journal For Grades 6-8	Explore how leaders are different. Develop a multi-media presentation. Set and achieve team goals. Practice teamwork. Grades 6-8
66	My Leadership Portfolio For Grades 9-12	Build trust in a group. Assess your own strengths and weaknesses. Write vision and mission statements. Contribute to a group project. Grades 9-12