

2008 Wisconsin 4-H Project Guide

Welcome to Wisconsin 4-H

Did you know . . . 4-H is the youth development part of University of Wisconsin-Extension. So, when you participate in 4-H, you are part of the UW System!

The 4-H pledge: “I pledge my head to clearer thinking, my heart to greater loyalty, my hands to larger service, my health to better living for my club, my community, my country and my world.”

The four “H’s” represent the four points of the pledge: clearer thinking (head), greater loyalty (heart), larger service (hands) and better living (health).

4-H is open to any youth eligible for 4-H membership regardless of race, color, creed, religion, sex, national origin, disability, ancestry, sexual orientation, pregnancy, marital or parental status.

How old do you need to be to join 4-H? You are eligible when you’re in first grade. First and second graders participate as Cloverbuds, though some counties extend Cloverbud membership to kids in kindergarten. You are eligible through the next 4-H year *after* graduation from high school. (Wisconsin 4-H membership policies are located at:

www.uwex.edu/ces/4h/resources/policies/documents/WI4HYouthDevelPolicies.pdf.)

In its early years, 4-H was a program just for farm kids. Today 4-H is for everyone. Boys and girls in towns and cities can enjoy 4-H as much as youth in the country. Over half of 4-H participants now live in larger cities, over one fourth live in towns and rural areas, and less than one fourth live on farms.

This year 4-H will reach nearly 250,000 Wisconsin youth from all 72 counties. They are involved in 2,100 clubs in community, school, and afterschool settings, as well as in camps, school enrichment programs, special interest groups, and independent study. There are many exciting ways that you can be part of 4-H and UW-Extension. Check with your county 4-H office (www.uwex.edu/ces/cty/) to see which kinds of opportunities are available to you.

This project guide lists some 70 different statewide project areas that you can enjoy. But besides 4-H projects, you can get involved in 4-H events and activities throughout the year, including drama festivals, style revues, animal judging contests, camps, county and state fairs, community services, tours, sports, exchanges, speeches, demonstrations, and more

There is lots to do in 4-H for older members. Many teen counselors are staff members at 4-H camps. About 500 teens exchange ideas and make new friends each June during State 4-H and Youth Conference at UW-Madison. Many enjoy 4-H educational trips to Washington D.C. and exchanges with 4-H families in other states. Some travel overseas for 4-H international experiences.

About 25,000 adult and youth volunteers give their time and talent to 4-H each year. The average volunteer donates about 200 hours each year to 4-H.

4-H-type programs are truly international. Over 80 countries have similar programs that reach millions of youth.

This is your guide . . . A 4-H project is an area that you want to learn more about during the year. There are projects on just about any topic you would like to study and explore, from art to woodworking, from computers to rabbits, from clothing to small engines.

The projects and literature listed in this guide are only *recommendations* from statewide project committees. Not all of these projects may be offered in your county. Your county may also use different literature for the projects you select.

So how do you know what projects are available to you? Your club organizational leader or enrollment coordinator can tell you what projects and resources are offered in your county.

Don't forget to check out the project pages on the Wisconsin 4-H Web Site at www.uwex.edu/ces/4h/onlinpro/index.cfm. On these pages, you'll find descriptions for these statewide projects, Internet resources and links of interest, county fair exhibit suggestions, state specialist contacts, and other suggested 4-H resources.

And remember, you'll learn more than "subject matter" as you complete your projects. You'll learn many "life" skills that you'll use every day of your life, such as, understanding yourself, communicating better, solving problems, making decisions, and working with others.

Good luck in your project selections. Have a great 4-H year!

How to Select 4-H Projects

4-H members . . . First, make a list of the things you like to do or want to learn more about. Talk over your list with your parents, leaders and friends. They may recognize some special things you are good at that you don't even realize you do well.

Then compare your list with the projects described in this guide and any other project list you may receive from your county. Ask yourself if you have the equipment, money and time to do the projects that sound interesting.

Your club organizational leader or enrollment coordinator will give you a form when you're ready to sign up for projects. You'll notice that each project has a computer code number assigned to it. Mark that code number on the form. (Don't use the "leader" project codes unless you're signing up as a youth leader for that project.)

Some projects have more than one level, such as, beginning, intermediate, and advanced. If you've had a lot of experience in an area, you may want to skip the first or beginning level of a project. Some projects also have grade recommendations. These are only recommendations.

If this is your first year in 4-H, concentrate on doing only two or three projects well. Usually you can spend more than one year in a project unit because there are enough ideas there to span two or three years. Most 4-H'ers take the levels in order, but what you decide to take as part of your project work is up to you.

4-H leaders . . . If you are a 4-H adult or youth leader, notice that some project code numbers are just for you. For example, if you are a leader for all of the Shooting Sports project units, you'll use code 630.

If there are several units within a project and you are a leader for only one of these units, then use the project code number for that unit. For example, if you are a Shooting Sports leader for just archery, use code 631. You'll need to make more than one entry if you are a leader for more than one project unit. For example, if you are a Shooting Sports leader for archery *and* air pistol, use codes 631 *and* 632.

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2008 4-H PROJECT GUIDE PROJECTS AND LITERATURE LIST

LEADERSHIP

- 100 Organizational Leader** (club general leader)
4-H350, Getting Started in 4-H Leadership - \$.00 (\$2.05)
4-H500, I'm a 4-H Project Leader: Now What Do I Do? - \$.00 (\$.35)
- 101 Co-organizational Leader** (club general co-leader)
See project code 100 for possible list of literature
- 102 Assistant Organizational Leader** (an assistant helping the general leader of the club)
See project code 100 for possible list of literature
- 104 Adult Advisor to Other Leaders**
- 105 Board Member** (member of advisory board, advisory council, executive committee or board of directors within the county)
- 106 Key Leader** (leader with countywide responsibilities for a project)
Literature will vary with the project; see project code 100 for possible list of other literature
- 107 Club Enrollment Leader** (leader responsible for club enrollments)
4-H218, 2008 Wisconsin 4-H Project Guide - \$.00
- 108 Club Activity Leader** (leader responsible for 4-H activities)
Literature will vary with the activity; see project code 100 for possible list of other literature
- 109 Parent Advisory Board Member**
- 120 Youth Leadership Leader**
BU7903, Leadership Mentor Guide for Grades K-5 - \$.00 (\$4.95)
BU7904, Leadership Mentor Guide for Grades 6-12 - \$.00 (\$4.95)
- 121 Youth Leadership 1**
This beginning project is aimed at grades 3-5. Assess your leadership skills, explore what's important to you, put yourself in someone else's shoes, understand self-responsibility, practice effective communication skills, organize your personal belongings, make an action plan to complete a project, set goals, make an invention, resolve conflicts, and plan a group event.
BU7905, My Leadership Workbook for Grades 3-5 - \$3.95
- 122 Youth Leadership 2**
This intermediate project is aimed at grades 6-8. Assess your leadership skills, learn what motivates you, explore how leaders are different and alike, build trust in yourself and others, explore self-responsibility, give a speech, develop a multimedia presentation, set and achieve team goals, identify talents in people around you, practice teamwork and group etiquette at a meeting, handle conflicts in a group, and make group decisions.
BU7906, My Leadership Journal for Grades 6-8 - \$3.95

123 Youth Leadership 3

This advanced project is aimed at grades 9-12. Assess your leadership skills, build trust in a group, explore how people are different and alike, assess your own strengths and weaknesses, build relationships and partnerships, participate in an interview, write vision and mission statements, role play conflict scenarios, explore an issue and develop recommendations, contribute to a group project, plan and organize meetings, and identify various leadership styles.

BU7907, My Leadership Portfolio for Grades 9-12 - \$3.95

YOUNGER MEMBERS

130 Exploring Leader

BU8172, Exploring the Treasures of 4-H Activity Guide - \$.00 (\$9.75)

BU6350, Exploring Farm Animals Group Activity Guide - \$.00 (\$3.95)

131 Exploring

This project is aimed primarily at youth in grade 3; however, check with your county 4-H office on its specific grade policy and project materials for the Exploring Project. Find a “treasure hunt” of activities where you’ll discover new things about yourself and 4-H. Sample a variety of projects offered in 4-H, from animals to arts, from gardening to woodworking, from fishing to foods.

BU8171, Exploring the Treasures of 4-H - \$3.95

135 Cloverbuds Leader

Besides the resources listed below, Cloverbud leaders will want to check out some of the other 4-H projects written for younger members: Aerospace 1, Art 1, Bicycling 1, Computers 1, and Latino Cultural Arts. Cloverbuds won’t be able to sign up for these projects until they’re in grade 3, but there are some fun activities in these project areas that you could use now with your Cloverbuds.

4-H414, Cloverbuds Leader Guide-Helping Youth Grow into 4-H - \$.00

4-HMI5560S, Cloverbuds-4-H Discovery Program for 6-8 Year Olds - \$.00

Each Club received a book if your club cannot find it, contact the Extension Office.

136 Cloverbuds 1

This project is aimed at grades 1 and 2. Choose from a number of fun activities: meet my pet, create a critter, sketching skills, flag fun, puppets with pizzazz, snack attack, smart shopping, bike driving skills test, birds I have seen, trees are tree-mendous, my family tree, a walk in my neighborhood, make a terrarium, my cup of soil, chemistry and cake, and my weather log.

4-HMI5561F, Cloverbuds – Activity Sheets – \$.00

4-HMI5562B, Cloverbuds – Program Record - \$.00

4-HMI5563A, Cloverbuds – Participation Summary - \$.00

SERVICE LEARNING AND CITIZENSHIP

175 Service Learning Leader

BU8184, Service Learning Helper’s Guide - \$.00 (\$3.95)

175A Service Learning 1

Make the world a better place by giving back to your community, in this project aimed at grades 5-8. Become a “special opportunity agent” as you follow a series of exciting activities that will engage you in your community and allow you to reflect on your experiences. Identify community needs, plan a service project, and execute your idea.

BU8182, Agents of Change - \$6.00

175B Service Learning 2

See how you can make the world a better place in this project aimed at grades 9-12. This project will engage you as a young leader. Voices of other real young people engaged in service will inspire you and connect you to others who have made an impact. Plan and implement your own service project.

BU8183, Raise Your Voice - \$6.00

180 Citizenship Leader

BU8154, Citizenship Guide's Handbook - \$.00 (\$3.95)

181 Citizenship

Improve the world around you through Public Adventures, the 4-H Citizenship project aimed at grades 4-12. Discover public issues that are important to you and others. Plan a project that will create, change, or improve something that's valuable to your community. Throughout the process, keep a journal of your thoughts, decisions, and actions.

BU8153, Citizenship Adventure Kit - \$6.25

SELF-DETERMINED

190 Self-Determined Leader

191 Self-Determined

This project gives you the freedom to create your own project or expand a traditional one. Select your project, outline a plan, identify resources, carry out and evaluate your plan. Do what *you* want to do!

4-H272, Designing Your Own Project - \$.65

ANIMAL SCIENCES

210 Beef Leader

BU8146, Beef Group Activity Guide - \$.00 (\$3.95)

211 Beef 1

This beginning project is aimed at grades 3-5. It's not necessary that you own an animal. Identify breeds and body parts, judge beef cattle, halter-break a calf, fit a steer, show a calf, recognize a healthy animal, select feed ingredients, shop for beef and beef byproducts, and more.

BU8143, Bite into Beef - \$3.95

4-H450, Judging Breeding & Market Cattle - \$

212 Beef 2

In this intermediate project aimed at grades 6-8, present oral reasons during judging and learn about feed ingredients, behavior, nose printing, parasites, fitting, ethical issues, beef carcass composition, retail meat cuts, and more.

BU8144, Here's the Beef - \$3.95

213 Beef 3

In this advanced project aimed at grades 9-12, explore selection and judging, feeds, careers, health, reproduction, meats and marketing, and more.

BU8145, Leading the Charge - \$3.95

215 Dairy Goats Leader

BU8355, Dairy Goat Helper's Guide - \$.00 (\$3.95)

216 Dairy Goats 1

This beginning project is aimed at grades 3-5. Whether you own a dairy goat or are just curious about goats, these activities provide enjoyable, hands-on experiences to introduce you to goats. Emphasis is on selection, feeding, management, fitting, showing, and responsible goat ownership.
BU8352, Getting Your Goat - \$3.95

217 Dairy Goats 2

This intermediate project is aimed at grades 6-8 who own a goat. Explore how to keep your goat healthy, feed it for maximum production, prepare for kidding, develop judging skills, milk a goat properly, and more. Exciting activities for teams and individuals are included.
BU8353, Stepping Out - \$3.95

218 Dairy Goats 3

This advanced project is aimed at grades 9-12 who own a goat. Delve into genetics, careers, national industry issues, diseases, biosecurity, body condition scoring, linear appraisal, breeding programs, pedigrees, dystocia, quality assurance, and leadership opportunities.
BU8354, Showing the Way - \$3.95

219 Meat Goats Leader

BU7912, Meat Goat Helper's Guide - \$.00 (\$3.95)

219A Meat Goats 1

This beginning project is aimed at grades 3-4. It's not necessary that you own a meat goat to get started. Activities include identifying meat goat breeds and parts, selecting a good project animal, feeding and caring for goats, designing a safe goat facility, developing a budget for a meat goat project, preparing a goat for show, exhibiting good sportsmanship in the ring, and more.
BU7909, Just Browsing - \$3.95

219B Meat Goats 2

This intermediate project is aimed at grades 5-7. Learn to recognize meat goat diseases, select a veterinarian, select foundation breeding stock, protect meat goats from poisonous plants and predators, evaluate the body condition of your project animal, handle manure properly, understand the reproductive cycle of goats, keep animal records, fit and show meat goats, and more.
BU7910, Get Growing with Meat Goats - \$3.95

219C Meat Goats 3

This advanced project is aimed at grades 8-12. Learn to control goat parasites and reproductive diseases, understand biosecurity and prevention measures, organize a goat judging clinic, choose sires to improve your meat goat herd, formulate rations for your project animal, evaluate goat pastures, understand and practice livestock show ethics, and more.
BU7911, Meating the Future - \$3.95

220 Dairy Leader

BU8164, Dairy Cattle Group Activity Guide - \$.00 (\$3.95)

221 Dairy 1

This beginning project is aimed at grades 3-5. It's not necessary that you own an animal. Identify dairy breeds, select calves, identify cow parts, recognize desirable traits, identify stages of calving

and care, pack a show box, groom and show a calf, and more.

BU8161, Cowabunga! - \$3.95

CANADA1, Showmanship. . . Leading To Win - \$4.25

CANADA2, Preparing to Lead – \$4.25

Dairy Cattle Judging Made Easy – Interactive CD - \$25.00

LDR, Lifetime Dairy Record - \$.15

222 Dairy 2

In this intermediate project aimed at grades 6-8, learn about housing, hay quality, milking, keeping animals healthy, parasites, behavior, and food safety. Explore ethical decision making, judging, careers, and more.

BU8162, Mooving Ahead - \$3.95

NCR593, Learning About Dairy Resource Manual - \$1.90

The Rules are Black and White – And they apply to all breeds - \$.00

223 Dairy 3

In this advanced project aimed at grades 9-12, practice mastitis detection, balancing a ration, pregnancy detection, delivery of a calf, body condition scoring, selecting cattle through records, promoting dairy products, and exploring career opportunities.

BU8163, Rising to the Top - \$3.95

230 Horse/Horseless Leader

BU8058, Horse Group Activity Guide - \$.00 (\$3.95)

231 Horses 1

In this beginning project, you don't have to own a horse or pony. You just need a desire to learn about horses, including horse behavior, terms, breeds, identification, body parts, selection, grooming, saddling, bridling, safety, and more.

BU8053, Giddy Up & Go - \$3.95

232 Horses 2

Learn about horsemanship, judging, oral reasons, selection, unsoundness, tack, training, showing, trail riding, riding skills, parasites, feeding, and more.

BU8054, Head, Heart & Hooves - \$3.95

233 Horses 3

Explore horse breeding, genetics and heredity, horse diseases and prevention, controlling parasites, fencing and pasturing, housing, horse careers, and more.

BU8055, Stable Relationships - \$3.95

233A Horses 4

Learn beginning riding skills and everything you need to know before you get on a horse for the first time. Activities include training a horse, round pen workout, English and Western style bridles, understanding equitation and riding style, and more.

BU8056, Riding the Range - \$3.95

233B Horses 5

Discover the ins and outs of showing your horse. Activities include setting goals, comparing costs of show clothing, pre-show fitting techniques, using the Quarter System for presenting horses in showmanship classes, rating your showmanship skills, and evaluating ethics in competitive situations.

BU8057, Jumping to New Heights - \$3.95

234 Horseless Horse 1

In this beginning project, you don't have to own a horse or pony of your own. You just need a desire to learn about horses. Explore horse behavior, terms, breeds, identification, body parts, selection, grooming, saddling, bridling, safety, and equipment.

BU8053, Giddy Up & Go - \$3.95

235 Horseless Horse 2

In this intermediate project, learn about horsemanship, judging, oral reasons, selection, unsoundness, tack, training, showing, trail riding, riding skills, parasites, feeding, and more.

BU8054, Head, Heart & Hooves - \$3.95

236 Horseless Horse 3

In this advanced project, explore horse breeding, genetics and heredity, horse diseases and prevention, controlling parasites, fencing and pasturing, housing, horse careers, and more.

BU8055, Stable Relationships - \$3.95

238 Clothes Horse

Learn how to make your own riding apparel and horse equipment, develop sewing and other creative skills, understand textile selection and care, and more.

4-H360, 4-H Clothes Horse Activity Guide - \$1.25

4-H374, Additional Patterns for Clothes Horse - \$1.50

4-H389, Horse & Riding Attire - \$1.53

240 Swine Leader

BU8068, Swine Group Activity Guide - \$.00 (\$3.95)

490XX, Swine Resource Handbook - \$.00 (

241 Swine 1

In this beginning project, identify swine breeds, feeds and parts of a pig's digestive system; complete a pig examination; practice judging market hogs; complete a budget; design a hog facility; identify pork cuts; practice fitting and showing, and more.

BU8065, The Incredible Pig - \$3.95

242 Swine 2

In this intermediate project, learn to make a swine health care plan, identify symptoms of swine diseases, plan and pack a show box for the fair, hold a pork tasting party, complete a plan for a new pork product, and plan and organize a facility expansion.

BU8066, Putting the Oink in Pig - \$3.95

243 Swine 3

In this advanced project, learn to make decisions on breeding and possibly culling a sow, judge a class of breeding gilts, design a preventive herd health program, manage the feeding of a market hog, design a swine unit, manage baby pigs, analyze your personal career preferences, and prepare a personal résumé.

BU8067, Going Whole Hog - \$3.95

250 Poultry Leader

BU6366, Poultry Group Activity Guide - \$.00 (\$3.95)

251 Poultry 1

This beginning project is aimed at grades 3-5. It's not necessary that you own an animal. Activities include identifying poultry breeds, parts of a bird, and parts and functions of eggs; cooking eggs; designing a brooding arrangement for chicks; handling poultry; selecting pullets; and fitting and showing poultry.

BU6363, Scratching the Surface - \$3.95

CIR878, From Egg to Chick (Optional) - \$8.20

252 Poultry 2

This intermediate project is aimed at grades 6-8. Learn to observe a healthy flock, identify parts and functions of a bird's skeleton, discover how an egg is formed, select and judge broilers, determine peck order, select hens for egg production, imprint with chicks, prevent poultry diseases, and more.

BU6364, Testing Your Wing - \$3.95

253 Poultry 3

This advanced project is aimed at grades 9-12. Learn to organize a judging clinic, manage a laying flock, mount a chicken skeleton, discover qualities of eggs, handle poultry products safely, process a chicken, explore poultry-related careers, and more.

BU6365, Flocking Together - \$3.95

254 Waterfowl

Learn about waterfowl breeds and parts, brooding and rearing, handling, sexing waterfowl, selecting and preparing waterfowl for market, selecting and managing breeder flocks, incubating and exhibiting waterfowl, and more.

A3311, Raising Waterfowl - \$

255 Turkeys

Learn about buying poultry, preparing a brooding area, rearing range turkeys, feeding and watering, lighting, preventing diseases, marketing and processing turkeys, and more.

NCR060, Raising a Small Turkey Flock - \$1.00

256 Bantams

Discover the value and purpose of bantams, as well as their characteristics, breeds, and varieties. Learn how to get started raising bantams, secure breeding stock, select and mate bantams, incubate and rear their young, feed and house them, protect them from diseases and parasites, fit and show them at your county fair, and more.

NCR209, Bantams - \$1.53

257 Pigeons

Learn about the buying, behavior, feeding, banding, record keeping, housing, handling, training, grooming, and exhibiting of pigeons, and more.

4-H135, Pigeons - \$1.15

260 Sheep Leader

BU6370, Sheep Group Activity Guide - \$.00 (\$3.95)

496XX, Sheep Resource Handbook - \$.00 (

261 Sheep 1

This beginning project is aimed at grades 3-5. It's not necessary that you own an animal. Activities include identifying sheep breeds and body parts, observing sheep behavior, identifying uses of wool, exploring sheep by-products, telling the age of sheep, fitting and showing sheep, judging

lambs, and more.

BU6367, Lambs, Rams and You - \$3.95

262 Sheep 2

This intermediate project is aimed at grades 6-8. Learn to identify sheep parasites, promote meat safety, judge sheep, save cold and weak newborn lambs, use medications safely, diagnose sheep diseases, explore sheep-related careers, and more.

BU6368, Shear Delight - \$3.95

263 Sheep 3

This advanced project is aimed at grades 9-12. Learn to set sheep production goals, make a budget, plan sheep-related activities, market sheep products, teach others about sheep, plan a judging contest, study genetics, explore sheep-related careers, and more.

BU6369, Leading the Flock - \$3.95

265 Cats Leader

BU8151, Cat Group Activity Guide - \$.00 (\$3.95)

266 Cats 1

This beginning project is aimed at grades 3-5. It's not necessary that you own a cat. Select a cat, identify breeds, name the parts of a cat, handle and groom a cat, care for its health, budget for its care, and more.

BU8148, Purr-fect Pals - \$3.95

267 Cats 2

In this intermediate project aimed at grades 6-8, learn about cat senses, meanings of cat sounds, tricks you can teach a cat, signs of illness and health, emergency situations, feeding, special diets, traveling with a cat, showing a cat, and more.

BU8149, Climbing Up! - \$3.95

268 Cats 3

In this advanced project aimed at grades 9-12, explore veterinary procedures, cat body systems, diseases, reproduction, genetics, older cat needs, behavior, showmanship, community laws, animal welfare, and more.

BU8150, Leaping Forward - \$3.95

270 Dogs Leader

BU8169, Dog Group Activity Guide - \$.00 (\$3.95)

271 Dogs 1

This beginning project is aimed at grades 3-5. It's not necessary that you own a dog. Learn basic skills for dog care and training, identify breeds, select a dog, learn the body parts of your dog, keep it healthy and groomed, train it, and more.

BU8166, Wiggles and Wags - \$3.95

272 Dogs 2

In this intermediate project aimed at grades 6-8, explore more about dog health, nutrition, care, genetic problems, population control, showmanship, training, ethics, budgeting, and more.

BU8167, Canine Connection - \$3.95

273 Dogs 3

In this advanced project aimed at grades 9-12, investigate responsible breeding, diseases, caring for geriatric dogs, training, service dogs, dog roles, careers related to dogs, and more.

BU8168, Leading the Pack - \$3.95

275 Rabbits Leader

BU8083, Rabbit Group Activity Guide - \$.00 (\$3.95)

276 Rabbits 1

In this beginning project, learn about selecting and handling rabbits, rabbit breeds and body parts, feeding, management, equipment, health conditions, breeding, kindling, and more.

BU8080, What's Hoppening? - \$3.95

277 Rabbits 2

In this intermediate project, learn to select, judge, give oral reasons, show rabbits (all 16 steps), tattoo, keep records, detect diseases, and more.

BU8081, Making Tracks - \$3.95

278 Rabbits 3

In this advanced project, learn about breeding, genetics, culling, designing a rabbitry, marketing rabbits, teaching others, preventing diseases, registering a rabbit, and more.

BU8082, All Ears - \$3.95

280 Veterinary Science Leader

BU8051, Veterinary Science Group Activity Guide – \$.00 (\$3.95)

4-H192, Veterinary Science - \$.00 (\$7.60)

4-H323, The Normal Animal – \$.00 (\$1.50)

281 Veterinary Science 1

In this beginning project, learn different breeds of animals, interpret animal behavior, meet animal needs, identify feed nutrients, describe animal life stages and systems, improve biosecurity in your home or farm, and learn what veterinarians do.

BU8048, From Airedales to Zebras - \$3.95

4-H334, Adventure Notebook - \$2.55

4-H131, The Normal Animal - \$7.60

282 Veterinary Science 2

In this intermediate project, create health records on your animal, investigate body systems and proper environments for animals, discover the importance of immunity and biosecurity, conduct a food safety experiment, examine disease topics, explore veterinary specialties, consider ethics and animal welfare, and more.

BU8049, All Systems Go - \$3.95

4-H048, Animal Disease - \$8.00

283 Veterinary Science 3

In this advanced project, investigate the importance of genetics, normal and abnormal systems, diseases that spread from animals to humans, animal population control, preparation for college, diversity of veterinary careers, and more.

BU8050, On the Cutting Edge - \$3.95

4-H133, Animal Health - \$8.90

290 Pets Leader

BU6362, Pet Group Activity Guide - \$.00 (\$3.95)

291 Pets 1

This beginning project is aimed at grades 3-5. It's not necessary that you own an animal. Explore your favorite pet, identify pet body parts, select a pet, handle your pet, provide a safe environment, design your pet's space, observe its behavior, explore the costs of pet ownership, and more. When signing up for this project, indicate type of pet on your enrollment form.

BU6359, Pet Pals - \$3.95

292 Pets 2

This intermediate project is aimed at grades 6-8. Explore animal digestion, consider the pet population issue, feed pets, shop for pet supplies, determine a pet's sex, explore animal health, study pet behavior, explore pet communication, photograph pets, take care of newborn animals, identify animal bones, and more. When signing up for this project, indicate type of pet on your enrollment form.

BU6360, Scurrying Ahead - \$3.95

293 Pets 3

This advanced project is aimed at grades 9-12. Explore pet products, classify animals, teach others about pets, understand how genetics work, keep a pet healthy, explore animal welfare issues, explore pet-related careers, and more. When signing up for this project, indicate type of pet on your enrollment form.

BU6361, Scaling the Heights - \$3.95

ARTS & COMMUNICATION

300 Photography Leader

301 Photography 1

In this new beginning project aimed at grades 3-5, explore the camera and the basics of lighting and good photo composition. All activities can be done with a point-and-shoot camera. Learn how to use your camera properly; use different types of light from natural to flash; take trick and black-and-white photos; shoot well-composed photos that tell a story; and more.

PC1, Focus on Photography - \$3.87

302 Photography 2

In this new intermediate project aimed at grades 6-8, learn more about camera adjustments, lighting and photo composition. All activities require a camera with adjustable features. Learn about film speed, shutter speed, aperture, and depth of field. Take silhouettes, candid, action shots, panning shots, close-ups, panoramas, montages, and special effect photos.

PC2, Controlling the Image - \$3.87

303 Photography 3

In this new advanced project aimed at grades 9-12, continue to learn more about photo equipment and photo-taking techniques. All activities require a camera with adjustable features. Learn about wide-angle and telephoto lenses, filters, infrared film, light meters, and studio lighting. Experiment with more special effect photos, as well as underwater and astrophotography. Take still life photos and portraits.

PC3, Mastering Photography - \$3.87

304 Videography

“Motion” pictures are what you see on movie and TV screens. Whether your camera uses videotape or movie film, the same techniques apply. In this project, learn storytelling, editing, planning, lighting, camera handling, making titles, recording sound, showing and reviewing your production, and more.

IS401, Action! Making Videos & Movies - \$1.25

311 Speaking

Plan, practice, and present an effective speech or demonstration. Gain confidence in your ability to speak in public.

COMM02, 4-H Public Speakers Handbook - \$4.70

COMM06, 4-H Public Speaking Opportunities – A Parent’s Handbook - \$4.00

312 Communications Leader

BU8159, Communications Helper’s Guide - \$.00 (3.95)

COMM04, Voices From the Past - \$.00 (\$4.00)

COMM05, It’s All in the Family – \$.00 (\$5.15)

COMM07, Communication Activities for 4-H Clubs - \$.00 (\$6.65)

312A Communications 1

In this beginning project for grades 3-5, engage in nonverbal, verbal, and written activities that stretch and strengthen your personal communication skills. Encrypt codes, write songs, give directions, deal with bullies, and more.

BU8156, Picking up the Pieces - \$3.95

312B Communications 2

In this intermediate project for grades 6-8, become a confident communicator as you present oral reasons, plan and present speeches, communicate assertively, practice making a good first impression, mentor others, and more.

BU8157, Putting It Together - \$3.95

312C Communications 3

In this advanced project for grades 9-12, polish your communication skills and develop a public presence by speaking in public, exploring communication careers, writing résumés, interviewing for a job, developing presentations, and more.

BU8158, The Perfect Fit - \$3.95

313 Creative Writing

Explore the importance of language and creative expression. Enjoy fun ideas, tips, and special projects to stimulate your creativity and self-expression in this project. Join a discussion group as you enrich your life-long joy of book reading.

COMM01, Creative Wordworking - \$4.95

COMM03, Crazy About Books Reading Circle - \$4.00

330 Arts & Crafts Leader

BU7597, Palette of Fun Helper’s Guide - \$.00 (\$15.00)

331A Art 1

Designed for grades K-6, this 4-H arts and crafts project will help you learn art through cutting and pasting, drawing, painting, printing, sculpting, and constructing with fibers and other materials.

23112, Elements and Principles of Design Card - \$5.28

4H472, *Palette of Fun Member Sheet and Introduction* \$.85

331B Art 2

In this advanced visual arts project for grades 7-12, explore art techniques, art history and culture, science behind the art, and artistic challenges in drawing, fiber arts, sculpting, painting, printing, and graphic design techniques.

BU8140, Advanced Visual Arts: Sketchbook Crossroads - \$7.50

BU8141, Advanced Visual Arts: Portfolio Pathways - \$7.50

333 Leathercraft

Learn about the characteristics and uses of leather, tools, and equipment; making patterns; original designs; leathercraft techniques; and more.

4-H149, Adventures in Leathercraft Members Guide - \$2.30

CIR006, Adventures in Leathercraft Leaders Guide - \$.00 (\$.85)

335 Block Printing

Design and cut blocks from different materials, print these designs on cloth and paper, and create your own original designs.

4-H156, Block Printing Members Guide - \$2.09

CIR008, Block Printing Leaders Guide - \$.00 (\$.15)

336 Metal Enameling

Try enameling earrings, pins, cuff links, and other jewelry; attaching fasteners; and creating original designs and patterns.

4-H158, Metal Enameling Members Guide - \$1.25

CIR009, Metal Enameling Leaders Guide - \$.00 (\$1.00)

337 Drawing & Painting

Learn to draw with pencil, chalk, crayon, pen and ink; blend and shade; draw from nature; make surface rubbings; paint with watercolor, poster paint, oil, and acrylics; use the brush; mix colors; and mat and frame your art.

4-H169, Drawing & Painting - \$1.95

340 Folk Arts Leader

NCR534, Folk Arts Leader Guide - \$.00 (\$25.69)

341 Folk Arts

Explore traditional folk arts while learning more about your family and community. Arts range from storytelling to polka dancing, egg decorating to basket making, hair braiding to doll making.

347 Latino Cultural Arts

In this project for grades K-8, understand the rich Latino culture by exploring its many traditional art forms. Make Latino instruments, jewelry, weavings, murals, masks, mosaics, yarn art, and more. Celebrate Latino holidays, sample Latino foods, and tell stories from around the Latino world.

BU8180, ¡QuéRico! La Cultura Bilingual Helper's Guide - \$.00 (\$9.75)

360 Theatre Arts Leader

BU8073, Theatre Arts Group Activity Guide - \$.00 (\$3.95)

361 Theatre Arts 1

Study acting, from sound, movement, voice and speech, to characterizations, play building, and

playing a scene. Try pantomime, clowning, improvising, monologues, and tableaux (stage pictures).
BU8070, Play the Role - \$3.95

362 Theatre Arts 2

Become a puppeteer! Investigate the history of puppets, types of puppetry and puppet characters, how to construct puppets and make them come alive, plan and present a puppet show, use puppets for community service, and more.

BU8071, Become a Puppeteer! - \$3.95

363 Theatre Arts 3

Study costumes, makeup, stage sets, props, sound, lighting, stage management, and theatre appreciation. Create sound effects and disguises, flood the stage with color and music, make up your own character, and more.

BU8072, Set the Stage - \$3.95

365 Clowning

Discover the history of clowning while you develop your own clown character, complete with makeup and costume. Study famous clown acts. Create your own clown props, including slapsticks, toys, and musical instruments.

4-H265, Enter the Clowns - \$.90

370 Music Leader

4-H351, Sing Along Songbook - \$.00 (\$5.80)

371 Music

Gain a greater appreciation of music. Ways to participate include listening, performing, composing, teaching, and making musical instruments. Enjoy this project alone or with your friends.

4H620MP, Youth and 4-H Music Project Guide - \$

373 Computers Leader

BU7512, Computer Mysteries Helper's Guide - \$.00 (

374 Computers 1

This project is designed for beginners with little or no experience but have access to a computer with a CD drive. Find out how computers are used today, identify parts of a computer, use a keyboard, use a mouse, clean a computer, evaluate software, produce computer-generated documents, learn about on-line safety, and conduct a search on the Internet.

BU7509, Booting Up – Interacting with Computers (with CD) – \$ (to be determined)

375 Computers 2

This project is designed for users who have some basic computer skills. Use the computer and Internet for research, take apart an old computer to understand how it works, use a database to organize and process information, get an e-mail address, talk in a chat room, use desktop publishing to create and print a publication, and more.

BU7510, Adding On – Hardware and Software Magic - \$ (to be determined)

376 Computers 3

This project is designed for the skilled user. You'll use the Internet for activities, build your own computer system, use a spreadsheet to make graphs and charts, design a web site, design a multimedia presentation, and more.

BU7511, Reaching Beyond – The Advanced User - \$ (to be determined)

FAMILY, HOME & HEALTH

400 Intergenerational Programs Leader

NCR548, Walk in My Shoes - \$.00 (\$7.55)

401 Intergenerational Programs

Learn to understand older people better by sharing their experiences. Learn what it feels like to grow older, what happens to our bodies as we age, and what is true and false about aging and older people.

NCR591, Walk in My Shoes – \$7.55

410 Child Development Leader

BU8078, Growing All Together - \$.00 (\$3.95)

411 Child Development 1

This beginning project is aimed at grades 3-4. Find out how *you* grow, babies develop into toddlers, and others are like you in so many ways but so different, too. Get yourself ready in the morning, help your family, and make toys safe for small kids.

BU8075, Growing On My Own - \$3.30

412 Child Development 2

This intermediate project is aimed at grades 5-6. Learn how to take care of yourself and your brothers and sisters. See what makes your family so special. Find out how to select toys appropriate for different age groups, define the traits you want in a friend, develop family rules, prepare healthy meals, check for safety hazards, and more. At the end of this project, you'll be ready for the Red Cross Babysitter's Training course.

BU8076, Growing With Others - \$3.95

413 Child Development 3

This advanced project is aimed at grades 7-10. Explore how to be an effective parent, carry out a community service project, gain experience as a teacher or coach, understand the perspectives of others, make babysitting and first aid kits, and make playgrounds safe in your neighborhood. Check out child development careers and the effects of TV on children.

BU8077, Growing in Communities - \$3.95

420 Clothing Leader

BU8063, Sewing Expressions Group Activity Guide - \$.00 (\$3.95)

421 Clothing 1

In this beginning project, identify sewing tools and machine parts, stitch on a serger, thread a sewing machine, identify types of fibers and fabrics, identify types of seam finishes, select and purchase a pattern, sew and clip a curved seam, sort clothes for laundry, remove stains, and donate a sewn project.

BU8060, Under Construction - \$3.95

MI7198, Let's Sew! - \$7.25

422 Clothing 2

In this intermediate sewing project, enhance your sewing skills beyond the basics. Identify types of fabric construction, natural and man-made fibers, and types of fabric coloration; make a patch pocket, insert a lapped zipper, sew buttonholes and different seam finishes; use pressing tools and

thread a serger; read International Care Symbols; research different laundry products; and set a price for textile products.

BU8061, Fashion Forward - \$3.95

423 Clothing 3

In this advanced sewing project, use specialized sewing tools or equipment; combine patterns to create a design; create outdoor wear; design and embellish a garment; sew with fabric containing spandex; identify clothing styles that enhance figures; use a computer to print on fabric; plan and conduct a style revue; study careers that work with fibers and textiles; and more.

BU8062, Refine Design - \$3.95

430 Crocheting Leader

431 Crocheting

Explore what to consider when buying yarn, thread, and equipment. Learn crocheting and finishing techniques, how to care for crocheted items, and more.

CC1403, Crochet Made Easy - \$4.90

440 Foods & Nutrition Leader

BU7730, Fantastic Foods Series Helper's Guide - \$.00 (\$3.95)

441 Foods & Nutrition 1

This beginning project is aimed at grades 3-4. Learn what's good to eat and how to fix foods, such as, pizza pockets, fruit kabobs, granola bars, pancakes, cookies, muffins, stuffed potatoes, churritos, ice cream, and watermelon slushes. Explore why calcium is important to your diet, understand TV commercial messages about food, decode food labels, and compare costs.

BU7144, Level A, Six Easy Bites - \$4.25

442 Foods & Nutrition 2

This intermediate project is aimed at grades 5-6. Make main dishes, Swedish meatballs, whole-wheat biscuits, muffins, vegetable salads, pasta, pretzels, cocoa mixes, and yogurt. Learn to change recipes, reduce the fat content in foods, make healthy food decisions, and compare food prices. Learn how to store fruit, vegetables and pizza, and how to reheat leftovers.

BU7146, Level B, Tasty Tidbits - \$4.25

443 Foods & Nutrition 3

This intermediate project is aimed at grades 7-9. Learn to evaluate nutrition information and fad diets. Develop your own exercise program. Learn how to cook less tender cuts of meat and divide family packs of ground meat. Make banana bread, tea rings, oven-baked chicken dinners, chicken curry, Maori bread, breadsticks, and stir-fried vegetables.

BU7148, Level C, You're the Chef - \$4.25

444 Foods & Nutrition 4

This advanced project is aimed at grades 10-12. Make a bean burrito, turkey, oven-roasted chicken, meat loaf, apple pie, Greek baklava, and Mexican flan. Learn how to can snap beans, make jelly, bake fish, and marinate meat. Conduct a food activity with young children, identify food assistance programs, "precycle" before shopping, divide recipes, and plan menus on a budget.

BU7150, Level D, Foodworks - \$4.25

450 Foods Preservation Leader

451 Foods Preservation

This beginning project introduces you to the basics of preserving fruits, vegetables, and meats safely. Select publications from the UW-Extension Safe Food Preservation Series for the foods that you want to preserve.

B0430, Canning Fruits Safely

B1159, Canning Vegetables Safely

B2267, Homemade Pickles and Relishes

B2605, Tomatoes Tart and Tasty

B2909, Making Jams, Jellies and Fruit Preserves

B3278, Freezing Fruits and Vegetables

B3345, Canning Meat, Wild Game, Poultry and Fish Safely

B3570, Canning Salsa Safely

Members need to notify the Extension Office which publications they want or they will not receive any due to the number of publications involved with this project.

465 Personal Finance Leader

BU7712, Financial Champions Helper's Guide – \$.00 (\$4.25)

465A Personal Finance 1

This project is aimed at grades 7-9. Learn money management skills and how to live within a spending plan.

BU7710, Financial Champions: Money FUNdamentals - \$3.95

465B Personal Finance 2

This project is aimed at grades 7-9. Learn about wants and needs, values, goal setting, communications, ways to use and save money, benefits and drawbacks of credit, advertising influences, consumer decision making, and how to select financial services.

BU7711, Financial Champions: Money Moves - \$3.95

466 Entrepreneurship Leader

BU8036, Entrepreneurship Helper's Guide - \$.00 (\$3.95)

466A Entrepreneurship 1

This project is aimed at grades 7-12. Explore what it takes to be an entrepreneur. Practice the skills needed to function successfully as an entrepreneur. Explore types of businesses, products and pricing, marketing, partnerships, agreements, and contracts. Create a business plan and start your own business.

BU8035, Entrepreneurship: Be the E - \$9.75

467 Workforce Readiness Leader

BU8192, Get in the Act! Take 1 Helper's Guide - \$.00 (\$3.95)

467A Workforce Readiness 1

This project is aimed at grades 6-9. Explore what it takes to get your first “paying” job as you recognize your own learning styles and personal qualities. Make “real life choices” using video scenarios in an on-the-job choices game. Discover how to assess job possibilities in the community and create job scenarios.

BU8191, Get in the Act! Take 1 (With CD) - \$6.00

470 Home Environment Leader

471 Home Environment 1

This beginning project introduces you to care of your home, design awareness, and sharing with family members and others. Learn to sand and finish a simple wood item, make a small cloth article, and make a wastebasket and pin-up board.

4H425, Exploring Your Home - \$1.50

472 Home Environment 2

This intermediate project will help you become more involved in activities around your home. Learn about handling home tasks, entertaining guests and setting short-range goals. Refinish wood furnishings, make cloth accessories for your home, and make a desk set.

4H426, Living with Others - \$1.50

473 Home Environment 3

This intermediate project introduces you to the principles of design. Learn how rhythm, balance, scale, proportion, emphasis, and unity work together to make every project more attractive. Use the principles of design to arrange items in your home, plan and create storage centers, restore furniture, and improve the outside environment of your home.

4H427, Where I Live - \$1.80

474 Home Environment 4

This advanced project focuses on application of design fundamentals within your home. Learn about purchasing furnishings for your home and restoring or making a heritage item.

4H465, In My Home - \$1.80

480 Knitting Leader

481 Knitting

Discover what to consider when buying yarn and knitting equipment. Learn knitting and finishing techniques. Correct knitting errors and care for knitted items.

CC1402, Knitting Made Easy - \$4.90

485 Consumer Savvy Leader

BU8033, Consumer Savvy Group Activity Guide - \$.00 (\$3.95)

486 Consumer Savvy 1

In this beginning project, understand your shopping style, find goods and services in the Yellow Pages, know the difference between your needs and wants, write savings and spending plans, keep a spending diary, compare prices, make consumer choices, give a gift using your own resources, start a service project in your community, start a savings account, and more.

BU8030, The Consumer in Me - \$3.95

487 Consumer Savvy 2

In this intermediate project, identify your personal values, make decisions based on your personal values, understand advertising appeal and the value of advertising, compare advertisements, see how peer pressure can influence your purchases and how to deal with it, and understand the risks of shopping on the Internet.

BU8031, Consumer Wise - \$3.95

488 Consumer Savvy 3

In this advanced project, define consumer responsibilities and ethics, understand your consumer rights, identify advertising targets, use comparison-shopping to save money, understand the impact

of money spent on the global economy, use reliable information on the Internet, identify agencies that assist consumers with complaints, and understand the costs of owning a vehicle.

BU8032, Consumer Roadmaps - \$3.95

490 Health Leader

491 Health 1

In this beginning project aimed at grades 3-5, practice first aid skills to treat cuts, scrapes, nosebleeds, and bee stings. Learn how to respond to someone who is choking or has broken a bone, assemble a first aid kit, interview members of the medical profession, and more.

BU8174, First Aid in Action - \$3.95

492 Health 2

In this intermediate project aimed at grades 6-8, use a self-assessment tool to identify your personal talent areas; explore hygiene, nutrition, and physical activities; share what you discover; and more.

BU8175, Staying Healthy - \$3.95

493 Health 3

In this advanced project aimed at grades 9-12, design your own personal fitness plan and track it using your own fitness file. Through interviews and personal experiences, discover the benefits of being fit.

BU8176, Keeping Fit - \$3.95

MECHANICAL SCIENCES

500 Aerospace Leader

BU6846, Flight Crew - \$.00 (\$3.95)

501 Aerospace 1

This younger member project is aimed at grades K-2. Build a rocket that you can eat, compare birds and airplanes, make a space helmet, and more.

BU6842, Pre-Flight - \$3.95

502 Aerospace 2

This beginning project is aimed at grades 3-5. Build a straw rocket, make a paper airplane, read a map, identify types of aircraft, discover how weather affects flying, build and fly a kite, make a hot-air balloon model and paper helicopter, and more.

BU6843, Lift Off - \$3.95

503 Aerospace 3

This intermediate project is aimed at grades 6-8. Build, exhibit, and launch model rockets, make and test a paper hang glider, make a flight simulator, demonstrate why rockets fly, organize a kite-flying contest, identify parts of a remote control, and more.

BU6844, Reaching New Heights - \$3.95

504 Aerospace 4

This advanced project is aimed at grades 9-12. Design and build model rockets and box kites, build an altitude tracker, plan a flight route, evaluate navigation systems, discover the effects of gravity, explore life in space and aerospace careers, and more.

BU6845, Pilot in Command - \$3.95

520 Bicycling Leader

BU8336, Bicycle Helper's Guide - \$.00 (\$3.95)

521 Bicycling 1

This beginning project is aimed at grades K-3. Learn the bicycling essentials for getting started safely and successfully. Begin exploring the basics toward lifelong cycling. Learn safety, road rules, and planning for a pleasant ride.

BU8334, Bicycling for Fun - \$3.95

522 Bicycling 2

This intermediate project is aimed at grades 4-6. Choose a bike that's right for you. Practice bike maintenance and road rules to make your rides safe and fun.

BU8335, Wheels in Motion - \$3.95

530 Electricity Leader

BU6852, Electric Helper's Guide - \$.00 (\$3.95)

531 Electricity 1

This beginning project is aimed at grades 4-5. Understand how we use electricity, identify electrical materials, build a flashlight, build and test a switch, wire a simple circuit, compare open and closed switches and circuits, discover parallel and series circuits, understand magnetism, build and test a compass, build an electromagnet and galvanometer, and build an electric motor.

BU6848, Magic of Electricity - \$3.95

532 Electricity 2

This intermediate project is aimed at grades 6-7. Become familiar with electrical equipment, learn about alternating and direct current, select and use a volt-ohm meter, identify conductors and insulators, learn to read circuit diagrams, build a circuit and measure voltages, build a parallel circuit, communicate in Morse code, explore three-way switches, and solder a circuit diagram.

BU6849, Investigating Electricity - \$3.95

533 Electricity 3

This intermediate project is aimed at grades 8-9. Develop a basic electrical tool and supply kit, interview an electrical inspector, read an electrical meter and appliance nameplate, locate the main service panel, understand the symbols on wires and cables, measure electricity usage of appliances, identify and test different receptacles, locate your home wiring system, replace a wall switch, and more.

BU6850, Wired for Power - \$3.95

534 Electricity 4

This advanced project is aimed at grades 10-12. Identify electrical and electronic parts and devices, then enter the world of semiconductors, diodes, resistors, capacitors, and coils. Learn how to solder and prepare parts for circuit assembly, read codes, connect a diode in a circuit, assemble a circuit using a transistor, test light emitting diodes, use a photocell to activate an alarm, build an amplifier to power a speaker, and more.

BU6851, Entering Electronics - \$3.95

537 Geospatial Leader

CD8358, Exploring Spaces, Going Places CD - \$.00 (\$15.00)

537A Geospatial 1

The beginning level of this project aimed at grades 4-12 is called “Getting Out.” Discover new ways of thinking about geographic positions, navigational tools (like GIS, GPS, compasses, maps and globes), identifying locations, and measuring distances.
CD8358, Exploring Spaces, Going Places CD - \$15.00

537B Geospatial 2

The intermediate level of this project aimed at grades 4-12 is called “On the Trail.” Learn how to collect data, combine the data with geographical positions, and then make your own maps . . . of school grounds, neighborhoods, farms, towns, states.
CD8358, Exploring Spaces, Going Places CD - \$15.00

537C Geospatial 3

The advanced level of this project aimed at grades 4-12 is called “Reaching Your Destination.” Use multi-layered maps to attempt to solve complex problems in your community, such as reducing traffic congestion, pinpointing pollution sources, boosting tourism, reducing disease, and controlling crime.
CD8358, Exploring Spaces, Going Places CD - \$15.00

538 Robotics Leader

BU8366, Robotics COACH Helper’s Guide - \$.00 (\$3.95)
CD8368, Robotics and You CD - \$.00 (\$15.00)

538A Robotics 1

In the beginning level of this project aimed at grades 4-8, explore programming concepts using the RoboLab language. Learn what a robot is, how to build one, and how to program the robot to use sensors to interact with its environment.
BU8364, Robotics EXPLORER - \$3.95

538B Robotics 2

Learn more advanced topics in both programming and mechanics. Advance your programming techniques, use subroutines and variables to achieve more precise movements of your robots, and build your own custom functions. Practice and develop creative thinking, decision making, and leadership skills!
BU8365, Robotics PROBE - \$3.95

550 Small Engines Leader

BU8189, Small Engines Group Activity Guide - \$.00 (\$3.95)

551 Small Engines 1

In this beginning project aimed at grades 3-5, focus on the basics of small engines, external engine parts, tools, what makes engines work, uses of small engines, and safety issues.
BU8186, Crank It Up! - \$3.95

552 Small Engines 2

In this intermediate project aimed at grades 6-8, explore the internal parts of engines, engine sizes, compression ratios, seasoning an engine, safety issues, jobs related to small engines, possibilities of starting your own business, and more.
BU8187, Warm It Up! - \$3.95

553 Small Engines 3

In this advanced project aimed at grades 9-12, tear down and rebuild an engine, use diagnostic

tools, research rules and regulations about using small engine machines, select replacement engines, and more.

BU8188, Tune It Up! - \$3.95

560 Scale Models Leader

561 Scale Models

Assemble and create scale models of trains, trucks, cars, ships, motorcycles, submarines, and tanks, including how to obtain the materials you need, paint your model, put on the decals, display your model, and judge it.

4-H424, Guidelines for Building Scale Models - \$.35

570 Tractors Leader

571 Tractors 1

This beginning project aimed at grades 3-4 is designed for youth with little or no prior agricultural tractor and equipment experience. Learn parts of a tractor, tractor maintenance, different fuels, engine cooling systems, and safety with augers.

4H961, Starting Up: Getting to Know Your Tractor, Level A - \$ (to be determined)

572 Tractors 2

This project aimed at grades 5-6 builds upon what you learned in Level A. It's designed for youth with little or no prior agricultural tractor and equipment experience. Learn farm and tractor safety, tractor maintenance, mechanics of the engine, accessory equipment, and functions of different operational systems.

4H962, Tractor Operations: Gearing Up for Safety, Level B - \$ (to be determined)

573 Tractors 3

This intermediate project aimed at grades 7-9 is designed for youth with some prior agricultural tractor and equipment experience. Learn about farm safety, tractor maintenance, types of oil systems, fuel safety, PTO hooking, and more.

4H963, Moving Out: Learning about Your Tractor and Farm Machinery, Level C - \$ (to be determined)

574 Tractors 4

This advanced project aimed at grades 10-12 is designed for youth with some prior agricultural tractor and equipment experience. Focus on safety, maintenance, mechanics, operational systems, equipment, and more.

4H964, Learning More: Learning About Agricultural Tractors & Equipment, Level D - \$ (to be determined)

580 Woodworking Leader

BU6879, Woodworking Helper's Guide - \$.00 (\$3.95)

581 Woodworking 1

This beginning project is aimed at grades 2-4. Learn safety practices, identify woodworking tools, observe the qualities of different woods, measure and mark boards, use a hammer and handsaw, identify types of nails, connect wood with glue, construct a butt joint, and sand and paint a piece of wood.

BU6875, Measuring Up - \$\$3.95

582 Woodworking 2

This intermediate project is aimed at grades 4-6. Identify the functions of various tools, practice safety techniques, use a bill of materials, select a project to build (birdhouse, letter holder, or foot stool), understand differences among species of lumber, use a screwdriver and combination square, make a miter cut, use a pad sander, and select a proper finish.

BU6876, Making the Cut - \$3.95

583 Woodworking 3

This intermediate project is aimed at grades 6-8. Compare different types of hinges, use clamps and a T-bevel, make dowel and dado joints, use various stains, enlarge scale-drawn woodworking plans, use a hand plane, build a laminated cutting board, compare different grades of plywood, and more.

BU6877, Nailing it Together - \$3.95

584 Woodworking 4

This advanced project is aimed at grades 9-12. Start your own woodworking business; use a table saw, router, powered circular saw, and power sander; make dovetail, as well as mortise and tenon joints; evaluate exotic and veneer woods; create inlays and overlays; test various adhesives; and use chemical strippers.

BU6878, Finishing Up - \$3.95

NATURAL RESOURCES AND ENVIRONMENTAL EDUCATION**600 Naturespace Leader**

4-H384, Naturespace Key Leader Orientation Packet - \$.00 (\$3.60)

PUBL-ER-001, Wisconsin Endangered & Threatened Species Laws & List - \$.00 (

601 Introduction to Naturespace

Select your own "Naturespace" and conduct an inventory of its environmental and ecological features. Explore habitats, populations, and relationships through a variety of fun activities.

4-H391, Introduction to Naturespace - \$1.50

4-H335, 4-H Naturespace Activities Guide - \$1.00

602 Birds

Learn about the birds in your community: how birds live, migrate, and defend their territory; how to watch, identify, band, and photograph them; and how to build feeders.

4-H340, Getting to Know Birds - \$4.75

605 Forestry Leader

BU8041, Forestry Group Activity Guide - \$.00 (\$3.95)

605A Forestry 1

In this beginning project, identify forest types, forest products, tree and leaf parts; distinguish between deciduous and conifer trees; age trees by counting rings; describe root systems; understand transpiration and photosynthesis; understand forest competition; recognize communities of trees; describe how leaves affect rainfall; and find a state forest.

BU8038, Follow the Path - \$3.95

605B Forestry 2

In this intermediate project, learn how trees move water from soil to canopy; diagram a leaf; describe a tree's life and decode its rings; understand major forest changes and the impact of invasive species; identify infectious and noninfectious tree diseases; identify and record insect

damage to trees; analyze fire risk; and select urban tree planting sites.
BU8039, Reach for the Canopy - \$3.95

605C Forestry 3

In this advanced project, identify an unknown tree using a tree key, make bark rubbings, recognize different tree fruits, determine the history of a neighborhood tree, create a community forest map, identify forest biomes by continent, identify how different cultures use forests, identify benefits and requirements of urban trees, and determine ownership of forests.
BU8040, Explore the Deep Woods - \$3.95

606 Wildflowers

Learn about the wildflowers in your community: how to identify wildflowers; how and where wildflowers grow; and how to collect, label, and mount them. Discover how humans affect wildflowers and how they enrich our lives.
4-H392, Wildflowers - \$3.10

610 Adventures Leader

4-H443, 4-H Adventure Project - \$.00 (\$1.90)

611 Introduction to Adventures

Learn how to camp safely in all weather conditions, investigate camping equipment and clothing, build a campfire and cook a meal, tie knots, practice first-aid, use a map and compass, and more.
4-H444, Introduction to Adventures - \$4.65

612 Backpacking & Hiking Leader

BU8046, Outdoor Adventures Group Activity Guide - \$.00 (\$3.95)

612A Backpacking & Hiking 1

In this beginning project, plan a day hike: select the items, plan the food, organize and pack a backpack; select appropriate outdoor clothing; prepare a first aid kit; prevent and care for blisters; study Leave No Trace principles; use a compass; prepare for potentially dangerous weather conditions; identify outdoor safe shelters; and observe plants and animals.
BU8043, Hiking Trails - \$3.95

612B Backpacking & Hiking 2

In this intermediate project, plan a camping trip: select equipment, select backpacking gear as a team, select an appropriate camping shelter, plan a camping cuisine menu, and select food preparation supplies; learn knot tying and the use of tools; practice Leave No Trace principles while hiking and picnicking; study types of organism habitats; select an appropriate cook stove; examine and purify water; and dispose of waste.
BU8044, Camping Adventures - \$3.95

612C Backpacking & Hiking 3

In this advanced project, plan a backpacking trip: select and adjust a backpack, select group backpacking gear, select and use a backpacking tent, and plan the meals and menu; design a non-tent backpacking shelter; share responsibilities for campsite tasks; research various environments; conduct a backpacking pyramid; develop a personal conditioning program; and orient a map and use triangulation.
BU8045, Backpacking Expeditions - \$3.95

613 Winter Travel

Discover silent winter travel on cross-country skis and snowshoes. Select and take care of your equipment and clothing, experience a winter overnight campout, see how plants and animals prepare for winter, track animals in the snow, design a cross-country ski conditioning program, and make a winter shelter.

4-H448, 4-H Adventure Project – Winter Travel - \$3.35

614 Canoeing

Learn how and where to canoe safely, select and care for equipment, explore aquatic environments with all your senses, plan a canoe camping trip, design and build your own paddle, canoe a river, practice canoeing ethics, and more.

4-H447, 4-H Adventure Project – Canoeing - \$3.35

615 Bicycling

Learn how and where to bicycle safely, select and care for equipment, explore the environment with all your senses, plan a bicycle camping trip, design and build a bicycle obstacle course, conduct a bike maintenance check, enter a bicycle rodeo, practice bicycling ethics, and more.

4-H446, 4-H Adventure Project – Bicycling - \$2.80

620 Entomology Leader

BU6856, Entomology Group Helper's Guide - \$.00 (\$3.95)

621 Entomology 1

This beginning project is aimed at grades 3-5. Learn about insects, their behavior, and their life history. Discover the parts of an insect's body, collect and compare insects, record insect observations, explore ways that insects communicate, describe how insects view the world, explore insect behavior, study insect controls, explore how insects move, and more.

BU6853, Creepy Crawlies - \$3.95

622 Entomology 2

This intermediate project is aimed at grades 6-8. Learn how an insect protects itself, explore insect habitats, collect and identify insects, survey pest levels, investigate entomology careers, create an insect display, conduct a test on bee taste preferences, observe an insect change its stages, collect insects at night, build an insect extractor, read insect control labels, and more.

BU6854, What's Bugging You? - \$3.95

623 Entomology 3

This advanced project is aimed at grades 9-12. Raise and study mealworms and mosquitoes, observe a colony of ants, manipulate bee behavior, organize an insect club, make an insect identification key, plant a butterfly garden, compare insect mouth types, collect spider webs, make a collection of insect wings, record insect stories in a journal, and collect aquatic insects.

BU6855, Dragons, Houses and Other Flies - \$3.95

630 Shooting Sports Leader

Goals of the 4-H Shooting Sports program are to give youth thorough instruction in gun safety, provide proper training in the use of firearms, create an appreciation of natural resources, and develop self-confidence and responsibility. Wisconsin county leaders must participate in a shooting sports workshop sanctioned by the state before offering 4-H Shooting Sports as a project.

Workshops are held each year. Check with your county 4-H office for times and locations, or consult the Wisconsin 4-H web site: www.uwex.edu/ces/4h/onlinpro/shooting/index.cfm. According to state policy, 4-H youth ages 8-11 cannot operate any powder-burning firearm. This includes, but is not

limited to, .22 handgun or rifle, muzzleloading handgun or rifle, or shotgun.
4-H428, 4-H Shooting Sports Program - \$.00 (\$2.35)

631 Archery

Learn the fundamentals of archery marksmanship and safety, making archery equipment, shooting form, shooting with sights, shooting compound bows, target archery games, and more.

4-H429, 4-H Shooting Sports-Basic Archery - \$5.95

632 Air Pistol

This project is an introduction to air pistols, including safety, marksmanship, and shooting procedures.

4-H431, 4-H Shooting Sports-Basic Air Pistol - \$4.10

633 Rifle

This project is an introduction to the air rifle and .22 rifle on dry firing; sighting; shooting for scores; scoring targets; and standing, kneeling, sitting, and prone positions. (According to state policy, 4-H youth ages 8-11 cannot operate any powder-burning firearm, including a .22 rifle. Youth ages 8-11 can participate in the 4-H air rifle discipline.)

4-H432, 4-H Shooting Sports-Basic Rifle - \$6.10

634 Hunting

This project is an introduction to the history, philosophy, and laws of hunting. Learn how to plan and equip yourself for a safe hunt. (According to state policy, 4-H youth ages 8-11 cannot operate any powder-burning firearm. This includes, but is not limited to, .22 handgun or rifle, muzzleloading handgun or rifle, or shotgun.)

4-H434A, 4-H Shooting Sports-Basic Hunting - \$6.40

635 Shotgun

This project presents basic shotgun knowledge on safe shotgun handling, shotgun-shooting fundamentals, firing the first shots, and caring for a shotgun. (According to state policy, 4-H youth ages 8-11 cannot operate any powder-burning firearm, including a shotgun.)

4-H433, 4-H Shooting Sports-Basic Shotgun - \$5.90

636 Muzzleloading

Learn about muzzleloading history, muzzleloaders and accessories, muzzleloading safety, and shooting and cleaning muzzleloading rifles and shotguns. (According to state policy, 4-H youth ages 8-11 cannot operate any powder-burning firearm, including a muzzleloading handgun, rifle, or shotgun.)

4-H430, 4-H Shooting Sports-Basic Muzzleloading - \$4.75

645 Recycling

This project presents a series of fun recycling activities. Learn about solid waste and how it can be handled to reduce the negative impact on our environment.

4-H362, Recycling for Reuse - \$3.35

650 Water Leader

4-H850 Give Water A Hand - \$.00 (\$2.85)

651 Water

Become a water quality detective. Identify water conservation and pollution issues in your home, school, farm, or community. Select an issue to focus on and then develop and implement a service

project or activity to help address the problem.
4-H855, Give Water A Hand-Action Guide - \$4.90

680 Sportfishing Leader

BU7601, Sportfishing Helper's Guide - \$.00 (\$3.95)

681 Sportfishing 1

This beginning project is aimed at grades 3-5. Tie fishing knots, cast a fishing lure accurately, rig your tackle to fish on the bottom, identify types of tackle, organize a tackle box, take proper care of your tackle, identify different types of baits, identify fish in your area, take proper care of your catch, identify parts of a fish, and more.

BU7598, Take the Bait - \$3.95

682 Sportfishing 2

This intermediate project is aimed at grades 6-8. Find fishing information on the Internet, cast a spinning rod and reel, cast a plug for accuracy, cast a fly, tie fishing knots, select a recipe and cook a fish, clean a shoreline, research state fishing regulations, decorate a lure, make a fly wallet, tie an artificial fly, collect and analyze aquatic life, test water for oxygen, and more.

BU7599, Reel in the Fun - \$3.95

683 Sportfishing 3

This advanced project is aimed at grades 9-12. Take a friend fishing, reassemble a fishing reel, make artificial flies and lures, modify fishing equipment, refurbish old fishing equipment, conduct water temperature experiments, collect aquatic insects using a kick net, identify insects that fish eat, learn about ethical angling, investigate sportfishing careers, keep a field journal about fishing, teach others how to identify fish, and more.

BU7600, Cast into the Future - \$3.95

PLANT & SOIL SCIENCES

700 Crops Leader

701 Corn

One of the tallest members of the grass family, corn is a valuable crop and interesting to grow. Learn about variety selection, germination, planting, nutrients, harvesting, and storage. Explore many uses and marketing strategies for corn.

4-H355, 4-H Corn Project Manual - \$3.35

702 Forage

Alfalfa is Wisconsin's most important forage crop. Establish and manage a forage crop; scout your fields for pests, diseases, and nutrition shortages; and take an accurate forage sample. Decide what forage growing techniques you want to study, then request the most recent UW-Extension publications.

4-H349, Pest Scouting Alfalfa - \$.85

703 Small Grains

Learn about other members of the grass families, such as wheat, oats, barley, and rye. Explore growing conditions, nutrients, integrated pest management, production costs, and marketing.

4-H356, 4-H Small Grains Manual - \$3.10

710 Fruits Leader

711 Fruits

Produce fruits from apples to grapes and select the best fruit cultivar for your home garden. Decide what fruit you want to learn more about, then consult the most recent UW-Extension publication on the topic.

A1597, Growing Strawberries in Wisconsin

A1610, Growing Raspberries in Wisconsin

A1656, Growing Grapes in Wisconsin

A1960, Growing Currants, Gooseberries, and Elderberries in Wisconsin

A2072, Growing Pears in Wisconsin

Members need to specify which publications they want or they will not receive any due to the number of publications involved with this project.

720 Vegetables Leader

BU7156, 4-H Horticulture Leader's Guide – \$.00 (\$8.30)

721 Vegetables 1

This beginning project is aimed at grades 3-5. Identify plant parts and their functions, explore germination, start a plant from a cutting, grow vegetables in containers, plan an outdoor garden, compare vegetable varieties, prepare a vegetable exhibit for show, make a compost column, interview people who grow plants, and more.

BU7153, Budding Gardeners - \$8.30

4-H395, Organically Grown – Handbook (Optional) - \$4.60

4-H409, Nature's Herbs (Optional) - \$1.15

A3306, Exhibiting & Judging Vegetables - \$.85

722 Vegetables 2

This intermediate project is aimed at grades 6-8. Learn about plant needs and soil testing, start new plants, grow transplants, explore hydroponics, build a compost pile, use mulches, examine plants for insect damage, keep records, judge a vegetable exhibit with oral reasons, and more.

BU7154, Branching Out - \$8.30

723 Vegetables 3

This advanced project is aimed at grades 9-12. Grow plants in a coldframe, take a tour of a horticulture business, make a site analysis and landscape plan, conduct a gardening clinic, design a plant experiment, compare organic and chemical fertilizing and insect control, explore horticulture careers, and more.

BU7155, Digging Deeper - \$8.30

730 House Plants Leader

BU7156, 4-H Horticulture Leader's Guide - \$.00 (\$8.30)

731 House Plants 1

This beginning project is aimed at grades 3-5. Identify plant parts and their functions, grow house plants, start a plant from a cutting, make a dish garden, prepare a house plants exhibit for show, and more.

BU7153, Budding Gardeners - \$8.30

4-H328, Propagating and Growing House Plants - \$1.25

732 House Plants 2

This intermediate project is aimed at grades 6-8. Learn about plant needs and soil testing, select and

start new plants, grow transplants, plant a terrarium, examine plants for insect damage, keep records, judge a house plants exhibit with oral reasons, and more.

BU7154, Branching Out - \$8.30

733 House Plants 3

This advanced project is aimed at grades 9-12. Take a tour of a horticulture business, design a plant experiment, teach others how to grow an herb garden, compare organic and chemical fertilizing and insect control, present an illustrated talk about house plants, develop a marketing plan, and more.

BU7155, Digging Deeper - \$8.30

735 Plant Crafts Leader

736 Plant Crafts

This project covers harvesting, drying, and using plant materials. Learn how to make dried arrangements, collages, potpourri, and other plant crafts.

4-H330, Plant Crafts - \$1.00

4-H453, Plant Crafts Supplement - \$.90

740 Flowers Leader

BU7156, 4-H Horticulture Leader's Guide - \$.00 (\$8.30)

741 Flowers 1

This beginning project is aimed at grades 3-5. Identify flowers parts and their functions, plant flowers, make a flower arrangement, give a presentation on flowers, prepare a flower exhibit for show, and more.

BU7153, Budding Gardeners - \$8.30

4-H1301A, Forcing Spring Flowering Bulbs - \$.85

742 Flowers 2

This intermediate project is aimed at grades 6-8. Learn about plant needs and soil testing, select and start new plants, grow transplants, examine plants for insect damage, make a mass flower arrangement, keep records, judge a flower exhibit with oral reasons, and more.

BU7154, Branching Out - \$8.30

743 Flowers 3

This advanced project is aimed at grades 9-12. Take a tour of a horticulture business, design a plant experiment, make a site analysis and landscape plan, teach others how to make a line-mass flower arrangement, write instructions on how to force bulbs, compare organic and chemical fertilizing and insect control, explore horticulture careers, and more.

BU7155, Digging Deeper - \$8.30

750 Home Grounds Leader

751 Home Grounds 1

Learn about seeding, lawn care, maintenance, fertilization, and responsible pesticide management.

4-H321, 4-H Lawn Care - \$1.25

752 Home Grounds 2

Learn about the importance of planting new trees, shrubs, and cultivars. Explore variety selection, and appropriate placement and maintenance techniques, including pruning, fertilization, and pest management.

A3067, Selecting, Planting & Caring for Shade Trees - \$.75

A1730, Evergreens – Planting & Care - \$.50

753 Home Grounds 3

This project explores landscape planning: putting the plan on paper; selecting, placing, and planting trees and shrubs; and maintaining the home grounds.

G1923, Planning & Designing Your Home Landscape - \$5.00

INTERNATIONAL PROGRAMS

915 International Leader

4-H812, And My World - \$.00 (\$13.15)

916 International 1

In this project for grades 3-12, explore the world around you. Use maps to identify places. Investigate the importance of nature's balance and the importance of our water supply. Track weather in various parts of the world. Conduct a global hunger buffet to experience world hunger. Make a family tree. Explore the issue of immigration and learn to appreciate the diversity in your community. Discover the meanings behind geographic names. Understand pressing global issues. Experience the lifestyles and concerns of families and youth from around the world. Sample other cultures. Make your own culture kits.

4-H812, And My World - \$13.15