

ALASKA 4-H RESOURCE GUIDE

UNIVERSITY OF ALASKA, FAIRBANKS — COOPERATIVE EXTENSION OFFICE

MAT-SU/COPPER RIVER DISTRICT OFFICE

The Power of 4-H

4-H is an endless parade of enthusiastic young people, young men and women exhilarated by the great challenges of tomorrow because they have already conquered the small challenges of today.

There are more than six million participants in 4-H, proving that young people respond to the 4-H challenge to do the difficult—*“To Make the Best Better.”*

4-H not only asks for the best work youngsters can produce, it gives them the guidance for accomplishing their goals.

Adults and youth, with a gift for leadership and liking for young people, volunteer their time to lead local groups, showing youngsters the “how to” and “why” of various activities.

4-H is an exciting, *“Learning by Doing”* experience in which 4-H’ers can select projects and set their own goals. By completing their projects, they have learned useful skills, dignity of work, the satisfaction of responsibility, and self-confidence to broaden their goals and interests.



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

National 4-H Council

The Purpose of the Resource Guide

This summary of 4-H resource materials is offered to assist 4-H Clubs and youth organizations of all kinds furthering the abilities of young people to cope with today’s challenges. It provides brief summaries of project material available at your Cooperative Extension District offices. By reviewing these summaries, adults and youth alike, can determine if projects are within their capabilities and resources.

If you wish to request any of the 4-H project materials or publications described here, contact your local Cooperative Extension office.

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Cooperative Extension Service offices



Mat-Su District/Copper River (907) 745-3360

809 South Chugach Street, Suite 2 Palmer, AK 99645

Anchorage District (907) 786-6300

2221 E. Northern Lights Blvd., Suite 118 Anchorage, AK 99508

Bethel Youth Center + 4-H Program (907) 543-2248

Box 388 Bethel, AK 99559

Eielson Air Force Base (907) 377-5191

354/FSS/SVYTR, 3112 Broadway, Unit 6B, Eielson AFB, AK 99702

Juneau District (907) 796-6221

1108 F Street, Suite 213, Juneau AK 99801

Kenai Peninsula District (907) 262-5824

43961 K-Beach Road, Soldotna, AK 99669-9728

Nome Northwest District (907) 443-2320

Box 400, Nome, AK 99762

Sitka District (907) 747-9440

1332 Seward Street, Sitka, AK 99835

Tanana District (907) 474-2426

Box 758155, Fairbanks, AK 99775

The Symbols of 4-H

The Four H's

The four H's stand for Head, Heart, Hands, and Health, representing the four-fold training and development that 4-H members receive. "Head, heart, and hands" was a familiar phrase in the early 1900's. With these words, educators expressed the liberalizing of conventional education (the three R's) to include practical arts (the three H's).

The three H's were adopted by program organizers to reflect the educational theme of 4-H. A fourth "H" was added for Health. Together the four H's symbolize the development of the head, to think, plan and reason; the heart, to be concerned with the welfare of others, accept the responsibilities of citizenship, and development of positive attitudes; the hands, to be useful, helpful, and skillful; and health, to practice healthful living, enjoy life, and use leisure time productively.

4-H Emblem

The national 4-H emblem is a green four-leaf clover with the letter "H" on each leaf. The design, attributed to O.H. Benson, an Iowa school superintendent, was adopted as the national emblem in 1911. Congress has twice passed legislation since that time protecting the 4-H name and emblem. Similar to a copyright, this protection means that the

4-H name and emblem cannot be used without being authorized by the national organization.

4-H Colors

Green and white are the 4-H colors. Green is emblematic of springtime, life, and youth, while white symbolizes high ideals.

4-H Moto

"To Make the Best Better," proposed by Carrie Harrison, a botanist with the U.S. Bureau of Plant Industry, was adopted in 1927 during the first National 4-H Club Camp in Washington, D.C.

4-H Pledge

In repeating the pledge, a member raises the right hand to the side of the head when speaking line one; lowers hand to heart when speaking line two; extends hands, palms upward, when speaking line three; and stands straight when speaking line four.

Otis Hall, Kansas state 4-H leader, created the original wording, which was adopted in 1927, and remained the same until 1973 when the words "and my world" were added.

I pledge

My head to clearer thinking

My heart to greater loyalty

My hands to larger service,

and

My health to better living

For my club, my community

My country and my world.

Agricultural Science & Animal Science

Cloverbuds

Cloverbuds is the name of the non-competitive, educational program for youth ages five to eight years. Cloverbuds explore through various learning experiences.

Curriculum has been selected specifically to allow Cloverbuds to be involved in activities and learning experiences that are developmentally appropriate. Children learn social skills, develop self-esteem, and build individual and family strengths.

What can you do in this project

- * Learn about yourself in relation to your family and your community
- * Practice safety skills and personal healthy habits
- * Take part in group activities



RESOURCES

Welcome to 4-H
Just for Leaders, Working with 4-H Cloverbuds
Discovery Program
Cloverbud Activity Sheets
Cloverbud Program Record



After-School Ag

4-H Afterschool creates and improves after-school programs through various methods of 4-H program delivery.



CURRICULUM:

<http://4h.uwex.edu/afterschool/curriculum/activities.cfm#juried>

<http://extension.unh.edu/4h/4HAfSchl.htm>

RESOURCES

Acres of Adventures 1
Acres of Adventures 2

<http://extension.unh.edu/resources/category/4-H>
www.clover.okstate.edu/fourh/aitc/

Beef Projects

Gain experience in selecting, feeding, managing, and marketing of beef animals. As part of the beef project, you may show a beef animal. You may choose either a breeding project or a market project.

What you can do in this project

- * Learn beef cattle parts and different breeds
- * Find out how to care for beef cattle and learn about their nutritional needs
- * Learn to make bull-buying decisions
- * Study why and how feeder and slaughter steers are put into grades

The Market Option is conducted on a year-to-year basis since it involves feeding one or more beef calves to market weight. The Breeding Option is a long range program over two or more years. Since much time and considerable expense is involved, care should be taken in selection of foundation breeding females.

MATERIALS:

1. Member manuals and records; Leaders guide
2. Beef animals
3. Visual Aids—Livestock judging slide sets (notebooks containing 21-57 slides on judging cattle, sheep, swine, and goats).

OBJECTIVES:

1. Learn about breeds and animal selection.
2. Learn how to feed, manage, house, and train beef animals.
3. Develop skills for financing, balanced rations, record keeping, and marketing.
4. Develop ability to recognize and prevent diseases and parasites.

RESOURCES

Beef Helpers Guide
Beef Project (Oregon)
Beef Project (Pacific Northwest)
Bite Into Beef
Here's the Beef
Leading the Charge
Calf Patterns



Animal Science

Cat Projects

Learn how to care for cats. Begin by learning about the needs and care of a cat before the family selects one. If the cat is currently owned, learn more about its behavior, nutritional needs, and health care. You may show a cat.

What you can do in this project

- * Make a poster of 10 or more cat breeds
- * Learn laws regarding pet care, pet waste, pet vaccinations, etc.
- * Calculate costs to keep a cat
- * Train, groom and show a cat
- * Study cat behavior and make a chart of reactions to noise, music, wind, etc.
- * Learn first aid for your cat
- * Attend a cat show



OBJECTIVES:

1. Teach responsibility.
2. Teach members the need for love, affection, and the need to give love in order to receive it.
3. Teach members the true values of life by caring for a pet.
4. Teach members the need for rules and restrictions.
5. Teach members the values of patience and self-control.

RESOURCES

Cat Helper's Guide
Purr-fect Pets #1
Climbing Up #2
Leaping Forward #3

Dairy Cattle Projects

Learn about the dairy industry through ownership of and care dairy animals and through active participation in community events. You may show a dairy calf, heifer, or cow as part of the project.

What you can do in this project

- * Recognize the various dairy breeds. Make a chart of the breeds
- * Learn about dairy products and how they are produced, packaged, and marketed
- * Learn how to care for dairy animals and keep them healthy
- * Attend a dairy show and take part in dairy judging events

MATERIALS:

1. Dairy cattle books
2. Dairy cattle and supplies

OBJECTIVE:

To learn the selection, breeding, feeding, milking, and health fundamentals for dairy animals and milk production.

RESOURCES

Dairy Helper's Guide
Dig Into Dairy
Cowabunga
Mooving Ahead
Leading the Way
Rising to the top



Dairy Goat Projects

Learn about the dairy industry through ownership of and care for dairy animals and through active participation in community events. You may show a dairy goat as part of the project.

What you can do in this project

- * Recognize the various dairy breeds. Make a chart of the breeds
- * Learn about dairy products and how they are produced, packaged, and marketed
- * Learn how to care for dairy animals and keep them healthy
- * Attend a dairy show and take part in dairy judging events

MATERIALS:

1. Dairy goat books
2. Dairy goat and supplies

OBJECTIVE:

To learn the selection, breeding, feeding, milking, and health fundamentals for dairy animals and milk production.



RESOURCES

Goat Helper's Guide
Getting Your goat
Showing the Way

Animal Science

Dog Projects

Humankind's best friend? People love their dogs. Learn to care for and train your dog. Gain proficiency in some phase of dog work, such as training, obedience, or agility. You may show dogs in showmanship, obedience, and agility as part of the dog project.

What you can do in this project

- * Make a chart of the seven breed groups: sporting, hound, working, terrier, toy, non-sporting, and herding
- * Become familiar with the roles of service dogs
- * Attend an obedience school or training clinic and take your dog along
- * Conduct a training clinic or dog show. Serve as a mentor for younger members enrolled in a dog project

MATERIALS:

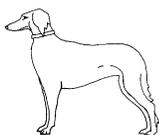
1. Member manuals and records; Leaders guide
2. Dog and supplies

OBJECTIVES:

1. Teach members to rear and understand animals.
2. Develop character in youth.
3. Teach members to have patience, persistence, to speak clearly in short concise statements and to realize the value of work.
4. Teach Members responsibility, pride in ownership, and decision making.

RESOURCES

Dog Helper's Guide
Canine Connection
Wiggles and Wings
Leading the Pack

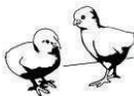


Embryology Projects

Study the development of an egg through hatching. Learn about embryo transfer in livestock.

What you can do in this project

- * Learn about the stages of development of an embryo
- * Explore ways embryology is benefitting agriculture today
- * Make a chart of the gestation lengths for each species of livestock



- * Build and operate an incubator
- * Watch an embryo develop

RESOURCES

Embryology 1: Hatching Classroom Fun (grades 2-5)

Embryology 2: Experiments in Poultry Science (grades 6-8)

Chick Development Poster

Entomology Projects

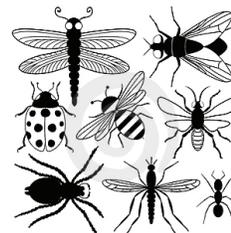
Bzzz! Learn about insects found in the soil, on plants, in homes, on pets, and even secret places! You may study of all types of insects—both beneficial and harmful. Using the entomology guides, you can explore the fascinating and amazing world of insects, including their arthropod relatives.

What you can do in this project

- * Learn to classify insects
- * Learn characteristics common to all insects
- * Learn insect life cycles and how insects change from egg to adult
- * Explore ways that insects communicate
- * Plant a butterfly garden
- * Study insects and their relationship to agricultural products, public health, and natural resources
- * Give a demonstration on how to pin, spread, and prepare insects for a collection or display
- * Make a collection net

RESOURCES

Entomology Helpers Handbook
Entomology Leader's Handbook
Basic Entomology Techniques
Advanced Entomology
Techniques
Handbook of the Insect
World
Insect Life cycle Studies
Learning to Draw Insects
Beginning Level
Intermediate Level
Advanced Level
Creepy Crawlies
What's Buggin' You?
Dragons Houses and Other flies
How Bees Live (Illinois)
Beekeeping (Illinois)
Beekeeping in Alaska



Animal Science

Exploring Farm Animals

If you are a young or first time 4-H member, you will have the opportunity to discover what your interests are. Explore arts and crafts, clothing, electricity, crops, conservation, food, entomology, home environment, child development, photography, rocks and minerals, or safety/health.

What you can do in this project

- * Sample activities in several different 4-H project areas
- * Plan a nutrition meal (Foods & Nutrition)
- * Make a puzzle or game (Child Development)
- * Create a collage or paint a picture (Visual Arts)
- * Be responsible for your pet (Small Animals)

RESOURCES

Exploring 4-H
Adventures in learning websites

Horse Projects

This project is divided into two projects: *Horses and Horsemanship* and *Horse Science*. *Horses and Horsemanship* includes sections on glossary of horse terms, breeds of light horses and ponies, color and color markings of horses, judging horses, gaits of horses, horsemanship equipment and tack, grooming and preparation for the show, the show ring, showing light horses at halter, care of the horses feet legs, training your horse and safety rules and precautions. *Horse Science* presents sections on the nature and behavior of the horse, function anatomy of the horse, unsoundness and blemishes of horses, determining a horse's age by its teeth, principles of reproduction in horses, how inheritance works, the digestive system of the horse, the nutrients and their importance, feeds for horses, balancing rations for horses, general health and sanitation principles, disease problems of horses, external parasites affecting the horse and internal parasites affecting the horse.

MATERIALS:

1. Member manuals and records; Leaders guide
2. Horse and supplies
3. Visual aids

OBJECTIVES:

1. Develop leadership, initiative, self-reliance,

sportsmanship and other desirable traits of character.

2. Experience the pride of owning a horse or pony and being responsible for its management.
3. Develop an appreciation of horseback riding as a healthy and wholesome form of recreation.
4. Learn skills in horsemanship and an understanding of the business of breeding, raising and training horses.
5. Increase knowledge of safety precautions to prevent injury to themselves, others and their mount.
6. Promote greater love for animals and a humane attitude towards them.
7. To be better prepared for citizenship responsibilities through working in groups and supporting community horse projects and activities.

RESOURCES

Horse Project Helper's Guide
4-H Colt & Horse Training
Dressage manual
Horses & Horsemanship
Unit 2 Horse Science
Horsing Around #1
Gallop Ahead #2
Blazing Trails #3
Horse Pattern
Giddy Up and Go Level 1
Head, Heart & Hooves, Level 2
Stable Relationships, Level 3
Riding the Range, Level 4
Jumping to New Heights, Level 5
Trail Riding (Ohio State)
Training Horses (Yearling to 5)
Performance Horse Member Manual
Unit 1 Beginning Horsemanship
Advancement Program Riding Tests/Exams
Horse Show Rule Book/Performance Horse Manual
Horse Judging Manual
Individual Horse Record
Horse Project Record book
Horse Judging (NC)
Hunt Seat & Jump Members Manual



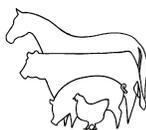
Animal Science

Livestock

By raising animals and selling the meat, 4-H'ers learn to make decisions, keep records, manage money, take responsibility for another living thing, budget time, and many other important characteristics. These are very important youth development activities.

The "Grand Finale" for most of these projects is exhibiting and selling their animals at the county fair, area livestock show, or State Fair. At these events members participate in friendly competition and are evaluated by an authority in the livestock industry. The market animals are sold at the conclusion of the event, providing an opportunity for the community to participate in the activity.

Livestock exhibitors do not get rich with their market animal projects. They invest lots in the animals bought at the beginning of the project, and spend money weekly for feed and other items needed to keep the animal comfortable and well cared for. In addition, they invest many hours of their time in providing care for their project animals.



RESOURCES

- 4-H Livestock Leaders Guide (Oregon State)
- Guide for Livestock Showmanship (Iowa)
- 4-H Meat Animal Evaluation & Judging (Oregon)
- Livestock Judging Guide (Nebraska)
- Livestock Showmanship (Colorado)
- Exploring the Small World of Small Animals

- www.wvu.edu/~exten/infores/pubs/livepoul.htm
- <https://www.extension.iastate.edu/store/ListCategories.aspx?TopicID=9>
- www.bccn.boone.in.us/ces/youth/animal_links.html

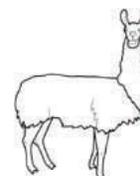
Llama

This project is designed to provide the 4-H member the opportunity to improve their knowledge and

understanding of llamas, while developing their leadership, sportsmanship and showmanship skills.

What you can do in this project

- * Learn some history about llamas
- * Pasture requirements of llamas
- * Develop an understanding of animal care and management
- * Develop knowledge, initiative, sportsmanship and responsibility
- * To maintain good record keeping habits
- * Learn about different uses for llamas
- * Gain a knowledge of training skills
- * Learn about tack and its care
- * Gain greater speaking ability to express your ideas to other 4-Hers, judges and the public
- * Experience the joy of having, caring for, exhibiting your llama



RESOURCES

- <http://4h.wsu.edu/projects/publications/llama/LlamaMM.pdf>
- <http://4h.wsu.edu/em2778cd/pdf/em4891.pdf>

Meat Goat Projects

This is a project designed by the member around a meat goat

MATERIALS:

1. Meat goat books
2. Meat goat and supplies

No suggested age level or time required.

OBJECTIVES:

1. To learn the selection, breeding, feeding and health fundamentals for meat animals.

RESOURCES

- Meat Goat Helper's Guide
- Just Browsing
- Growing with Meat Goats

Making the Best Better

Animal Science

Pets

Youngsters learn how to care for their pets, as well as the science and nature of companion animals. Pets have included cats, tropical fish, rabbits, birds, gerbils, hamsters, guinea pigs and dogs. This project offers the opportunity for a youngster to have some meaningful responsibility and take pride in caring for something alive.

OBJECTIVES:

1. Develop the personal skills in the area of decision-making, communication, leadership, citizenship, learning to learn, coping with change, and enhancing positive self-esteem.
2. Explore feelings of caring, enjoyment, success, and fulfillment as a result of interaction between youth and the pet.
3. Understand the interdependence of people and other animals.
4. Develop skills and attitudes needed to be responsible pet owners.
5. Gain knowledge about the care of the animal including nutrition, health care, reproduction, and grooming.
6. Develop an understanding of animal behavior.

RESOURCES

Pet Helper's Guide
 Pet Pals
 Scurrying Ahead
 Scaling the Heights



Poultry Projects

Learn about production and marketing of poultry and/or eggs. You may show birds as part of the poultry project.

What can you do in this project

- * Learn basic disease control and sanitation practices
- * Figure the costs to raise poultry
- * Discover how an egg is formed. Set up a brooder unit with brooder, water, feed, litter, etc.
- * Identify poultry breeds in your area

MATERIALS:

1. Member manuals and records

1. Chickens
2. Brooding, Feeding and housing Materials

OBJECTIVES:

1. Provide opportunity to keep poultry for meat, eggs, and hobby purposes.
2. Develop skills knowing breed characteristics and primary utilizations within poultry of birds.
3. Help develop understanding of equipment, lighting, predator control, and housing needs of birds.
4. Provide opportunity to understand nutrient and health requirements for meat and egg production.
5. Give experiences of showing birds and develop skills of showmanship.
6. Provide opportunity to keep records and evaluate of poultry products to family or business activity.

RESOURCES

Poultry Helpers Guide
 Scratching The Surface
 Testing Your Wings
 Flocking Together



www.wvu.edu/~exten/infores/pubs/livepoul.htm
www.ansi.okstate.edu/poultrypage/
<http://edis.ifas.ufl.edu/>
 TOPIC_4H_Poultry_and_Embryology

Rabbit Projects

Raising rabbits requires very little space and a small investment. Learn to recognize quality animals according to the breed's standards. You may show rabbits as part of the project.

What you can do in this project

- * Learn about rabbit parts and breeds
- * Become familiar with the standards for rabbit breeds
- * Find out how to tattoo a rabbit
- * Build a rabbit hutch
- * Own one or more does and appropriate number of bucks for market, raise one or more litters and market offspring, provide for proper housing, feed and care of animals.



Animal Science

- * Own one rabbit as a pet. Members must provide for proper housing, feed, and care of animal.

MATERIALS:

1. Member manuals
2. Rabbits
3. Housing materials

RESOURCES

Rabbit Helpers Guide
 What's Hopping?
 Making Tracks
 All Ears
 Rabbit Fitting and Showmanship
 Rabbit Pattern

http://edis.ifas.ufl.edu/topic_rabbits

1. To accept responsibility by having an animal of your own to care for regularly.
2. Observe how animals live and produce their young.
3. To develop skills of keeping and using records.

RESOURCES

Sheep Helpers Guide
 Rams, Lambs, and You #1
 Shear Delight #2
 Leading the Flock #3
 Lamb or Kid Pattern
 Leading the Flock
 Lamb Pattern
 Alaska 4-H Livestock Leaders Guide
 4-H Meat Animal Evaluation & Judging
 Livestock Judging (Nebraska)
 Livestock Showmanship (Colorado)



Sheep & Wool Projects

Learn about sheep production, management, and marketing. You may show sheep as part of the project.

What you can do in this project

- * Learn how to feed and care for sheep
- * Make a poster of different breeds of sheep
- * Learn to identify different parts of a sheep
- * Learn how to fit and show sheep
- * Own or manage one or more ewes and her lambs
- * Set production goals and make graphs or charts of results
- * Figure out how much and what a ewe or lamb eats in one year
- * Demonstrate how to feed a lamb at different ages

MATERIALS:

1. Member manuals and records
2. Sheep
3. Housing, feeding and grooming equipment

OBJECTIVES:

1. To learn skills of selecting and raising sheep.
2. To learn proper feeding, disease control, and proper management of sheep.



Small Pets Project

Learn how to care for gerbils, hamsters, birds, (canaries and parakeets), and guinea pigs. Begin by learning about the needs and care of a pet before one is selected. If you currently have a pet, learn more about its behavior, nutritional needs, and health care.

What you can do in this project

- * Make a list of different kinds of small pet
- * Calculate costs to keep a pet
- * Study pet behavior and make a chart of pet reactions to noise, music, wind, etc.
- * Learn first aid for your pet.

RESOURCES

Your Guinea Pig: Kids
 Guide to Raising
 (on loan only)

Swine Project

Learn to purchase, care for, feed, manage, and market swine. You may show swine as part of the project. Choose a breeding or market project.

What you can do in this project

- * Learn how to feed and care for swine
- * Learn to select and manage swine

continued on next page

Animal Science & Engineering and Technology

- * Make a diagram of pig parts
- * Find out how to manage a swine breeding operation
- * Keep accurate feed, health, and cost records

MATERIALS:

1. Member manuals and records
2. Swine
3. Housing, feeding and grooming equipment

RESOURCES

Swine Helpers Guide
 Swine Resource Handbook
 Growing with Swine
 Becoming Swine Smart
 Entering the Arena
 Swine Pattern
 The Incredible Pig
 Putting the Oink in Pig
 Going Whole Hog
 Swine Project
 Feeding and Managing Baby Pigs (UM copies only)
 Alaska 4-H Livestock Leaders Guide
 4-H Meat Animal Evaluation & Judging
 Livestock Judging (Nebraska)
 Livestock Showmanship (Colorado)



www.edis.ifas.ufl.edu/TOPIC_4H_Swine
<http://downloads.cas.psu.edu/4H/4HMarketProjectSwine.pdf>

Vet Science Project

Discover how to better understand animals. Whether you live in a rural or urban area, knowledge of animal diseases and health care is very valuable. Learn about basic animal health, the relationship between the animal and its environment, and the importance of animal health to humans. Explore the field of veterinary medicine as a possible career.

What you can do in this project

- * Take an animal's pulse and temperature
- * Recognize healthy skin and membranes
- * Collect and make a file of various disinfectants

- * Research recent developments in an animal disease
- * Trace the discovery of control measures for various diseases

RESOURCES

Vet Science Leaders &
 Vet Science Helpers Guide
 Animal Health Self-Study
 Animal Disease
 Airedales to Zebras
 All Systems go
 On Cutting Edge
 The Normal Animal



<http://4h.uwex.edu/onlinpro/vetscience.cfm>
www.utextension.utk.edu/4H/projects/vetscience.htm
<http://spectre.nmsu.edu/fourh/docs/Veterinary%20Science.pdf>

Aerospace & Rocketry

The fascination of flying an airplane, launching a rocket, conquering space, and becoming an astronaut or pilot will come alive as you explore aviation and space. Learn about flying kites, hot air balloons, remote control airplanes, gliders, and space shuttles.

What can you do in this project

- * Identify a variety of aircraft
- * Design, build, and launch your own rocket or model plane
- * Learn about safety issues for constructing and launching rockets
- * Visit an airport

RESOURCES

Flight Crew
 Aerospace CD-ROM
 Pre Flight
 Lift Off
 Reaching New Heights
 Pilot in Command
 Launching Aerospace Program
 NASA kids webpage:
www.nasa.gov/audience/for_kids/kidsclub/flash/index.html



Engineering and Technology

Computer Power Unlimited

Learn about computers, software, and the Internet by using a combination of interactive CD-ROMs and web-based activities.

What you can do in this project

- * Become familiar with several software programs
- * Learn to use the Internet
- * Identify computer hardware
- * Learn how to build and repair your own computer system
- * Explore ways to use a computer in other 4-H projects



RESOURCES

Computer Helper's Guide
 Booting Up (Includes CD)
 Adding on Hardware and Software (website included)
 Reaching Beyond (website included)

Robotics

This robotics curriculum using the LEGO(r) Mindstorms product is an ideal way to introduce science, math, engineering and technology skills while teaching life skills to youth ages 9 through 13. By using the activity guides and the Robotics and You CD, youth learn to build and program a robot to perform increasingly difficult tasks.

OBJECTIVES:

- * how to develop marketable and productive skills for work and family life in science and technology;
- * how to effectively communicate with others; and
- * skills such as decision-making, getting along with others, planning and organizing, and responsibility.

RESOURCES
 Helper's Guide—Robotics
 Coach
 Robotics Explorer
 Robotics Probe



<http://4h.uwex.edu/onlinpro/robotics.cfm>
www.getsetsite.org/robokids/resources.htm

Electric Excitement

Shocking? Discover how electricity works and how it saves time and labor. Atoms and electricity, current and voltage, generating electricity, electrical circuits and applications and using electricity as energy source safely and wisely.

What you can do in this project

- * Learn the basic concepts and terminology of electricity
- * Construct simple switches/circuit boards/wire circuits
- * Measure electricity usage of appliances
- * Conduct a home safety hazard hunt of plugs, outlets, electrical cord

MATERIALS

1. Members' manuals and records; Leaders' Guides
2. Old magazines/catalogs
3. Small sheet of glass, tissue paper, scissors, piece of silk cloth, two books, clothes brush, and ping pong ball
4. Two watt neon bulb, three dry cell batteries, electrical socket, wire and extension cord with light socket
5. Zinc and copper strips, large glass jar, a 50-0-50 amp meter, sulfuric acid solution, and wire
6. Sponge, pencil, and light bulb
7. Old crank generator and wire
8. Wide mouth jar, cord, two nails, 4" nichrome wire, three 1 1/2 volt dry cells, thin insulated wire and a hammer
9. Magnets and large bolt



OBJECTIVES

1. Develop an understanding of the basic principles and theories of electricity
2. Understand the important effects electric energy has on humans and the environment
3. Acquire knowledge regarding efficient utilization of electric energy through the production of heat, light, power, communications and computations
4. Increase the awareness, concern, and knowledge regarding generation, transmission, and distribution of electric energy
5. Explore career opportunities associated with the electric and allied industries

continued on next page

Engineering and Technology

- Develop leadership talents and work towards achieving the broad objectives of character and effective citizenship

RESOURCES

Helper's Guide
 Magic of Electricity
 Investigating Electricity
 Wired for Power
 Entering Electronics
<http://pa4h.cas.psu.edu/102.htm>

Fashion Forward
 Refine Design

www.craftandfabriclinks.com/sewingbook/sewbook.html
www.sewing.org/index.html
<https://secure.agriculture.purdue.edu/store/subcategory.asp?ListType=free&subCatID=117>

Textile
 projects: <http://pa4h.cas.psu.edu/127.htm>

Clothing and Textiles

What do I wear today? Clothing is basic to our everyday lives. Learn about appearance, good grooming habits, garment construction, ready-to-wear clothing selection, clothing care, and wardrobe planning.

What can I do in this project?

- * Learn clothing construction techniques
- * Learn to select fabrics and patterns for your own figure type, skin tone, and lifestyle
- * Construct a pillow, back pack or garment
- * Put together a display for selected garments to demonstrate wardrobe principles
- * Enter Fashion Revue contest
- * Make a poster about types of fibers or fabrics



MATERIALS

- Members Manuals and records, Leaders' Guides
- Clothing materials (patterns, fabric, trim notions, etc.)
- Sewing machine and accessories
- Scissors, straight pins, measure tape, markers, pin cushion, etc.

OBJECTIVES:

- Help members build self-confidence and poise through developing skills relating to the clothing world.

RESOURCES

Helper's Guide
 Under Construction

Automotive and Small Engines

Explore basic principles of how engines work. Learn about engines in lawn movers, motorcycles, farm machinery, and cars. Discover how to safely operate and care for machinery.

What you can do in this project

- * Learn how to operate machines safely
- * Learn how to properly maintain a vehicle
- * Evaluate the cost of owning and operating a vehicle
- * Practice assembling and disassembling an engine
- * Keep records of purchase, operating, and maintenance costs
- * Demonstrate how to time an engine

MATERIALS

- Member's manuals and records (Leader's Guides)
- Old and new engines (two and four cycle)
- Tools for engine disassembly
- Oil, gas and proper storage utensils
- Compression gauge, spark plugs, wire gauges, rags/scrapers



OBJECTIVES

- Teach members basic principles of engine operation
- Teach members how to identify types of small engines
- Teach members the safe way to operate power equipment

Engineering and Technology

3. Develop an awareness of the many applications of the two and four cycle engines
4. Develop an awareness of the safe use of lawn and garden power equipment

AVAILABLE MANUALS

Small Engines Helper's Guide
 Crank It Up #1
 Tune It Up #2
 Tune It Up #3

www.briggsandstratton.com
www.arian.com
www.deere.com
www.kohlerengines.com
<http://www.tecumseh.com/homepage.htm>

Welding

Develop welding skills for use on the farm/ranch or in preparation for a career in welding. May be Acetylene or ARC welding.

What you can do in this project

- * Learn basics of operation, application, and adjustment of welding equipment
- * Discover the different kinds of welding, how they work and how they are different from each other

RESOURCES

<http://estore.osu-extension.org/productdetails.cfm?PC=1992>



Woodworking

Build, remodel, or repair wooden objects, furniture, and home accessories. Learn to identify the different types of wood. Develop woodworking skills and finishing techniques.

What you can do in this project

- * Learn operation, application, and adjustment of equipment
- * Learn the difference between soft and hard varieties of wood

- * Practice safe and proper use and care of hand and power tools

MATERIALS

1. Member's manuals and records (Leader's Manuals)
2. Woodworking hand and power tools
3. Selection of woods

OBJECTIVES

1. Develop leadership talents and to work toward achieving the broad objectives of character and effective leadership
2. Select, use and care for hand and power woodworking tools skillfully and safety.
3. Develop an interest in the craft of woodworking as an enjoyable leisure-time activity and profitable hobby.
4. Develop necessary skills to make wood articles and to properly finish them for protection and beauty.
5. Develop an awareness of the career opportunities for competent person in the field of construction, wood technology and engineering.
6. Learn about different wood fastening methods and how and when to use them properly.
7. Learn about lumber—thickness, width and length and how to calculate board feet.
8. Learn how to read and develop plans and drawings.
9. Learn to identify and know the use of different kinds of wood.

RESOURCES

Woodworking Helpers' Guide
 Measuring UP #1
 Making the Cut #2
 Nailing it Together #3
 Finishing up #4



www.wvu.edu/~exten/infores/pubs/other/wooddr2.pdf
www.oznet.ksu.edu/library/4h_y2/4h167.pdf
<http://downloads.cas.psu.edu/4H/4-HWoodworkingReferences.doc>
<http://warnell.forestry.uga.edu/service/library/for95-014/for95-014.pdf>

Environmental Science

Forestry

Identify one tree or a whole forest of trees. Gain knowledge of how trees grow, how they reproduce, and why they are important to the environment and to our everyday lives.

What you can do in this project

- * Learn to identify different kinds of trees in your community
- * Learn how trees survive during drought
- * Learn about the role trees play in the environment
- * Give a talk explaining methods used to replenish forests
- * Plant tree(s) in your yard, park, or school grounds. Take care of it throughout the summer

MATERIALS

1. Members' Manual and Leader's Guide
2. Visual aids, posters, wall charts, slide series or films
3. Borer, saw, clip board, fly chart
4. Cross section of a tree or branch

OBJECTIVES:

1. To learn about our forest resources
2. To identify trees and recognize relationships to other natural resources
3. To appreciate the many uses and values of trees to man

RESOURCES

Forests Helpers' Guide
 Trees Helper's Guide
 Follow the Path #1
 Reach for the Canopy #2
 Explore the Deep Woods #3
 4-H Forestry Project—
 Trees—Unit A
 4-H Forestry Project—Forests—Unit B



Weather

The purpose of the 4-H weather project is to provide participants the ability to observe the weather, keep records of the changes in weather, utilize simple home-made and inexpensive instruments for observation, perform experiments to gain insight of weather occurrences, and to ultimately understand and

appreciate the relationships of weather.

OBJECTIVES:

- * Learn how temperature changes affect other weather conditions.
- * Learn how wind patterns affect the weather.
- * Learn why humidity is one of the weather variables.
- * Make a weather station.
- * Give a weather demonstration.
- * Exhibit a weather station at the fair.
- * Submit project records and weather observations.



RESOURCES

Helper's Guide (Purdue)

<http://www.ca.uky.edu/agc/pubs/4da/4da03pa/4da03pa.pdf>
<http://fawn.ifas.ufl.edu/4h/>
www.four-h.purdue.edu/natural_resources/Projects/weather/index.htm

Fishing for Adventure

What is a habitat? Where do fish live and why? Learn different types of fish and their habitats. Explore management practices—both to preserve the species and to allow sport and commercial fishing. Observe and identify fish in their different environments.

What can you do in this project

- * Find out what kinds of fish are found in your area
- * Learn management terminology
- * Make a nature diorama
- * Create fishing tackle
- * Learn how to be a good steward of aquatic resources
- * Tour a fish hatchery

RESOURCES

Sport Fishing Helper's
 Guide
 Take the Bait #1
 Reel in the Fun #2
 Cast into the Future #3



Environmental Science

Environment

Geology and Minerals

Earth rocks! Learn about the importance of rocks and minerals in our daily lives. Discover the history of Alaska and other locations through rocks and fossils.

What you can do in this project

- * Learn about rocks and minerals and how to classify them.
- * Take a field trip and keep notes about rocks you find
- * Collect, clean, identify, and label rocks, minerals, and fossils.

RESOURCES

Encyclopedia of Rocks, Minerals and Gemstones, ISBN 1571455620
Science Discovery Series, Level 1

Conservation and Stewardship

Our planet is rich in resources—water, clean air, vegetation, and animals. Learn how to manage and use them wisely. Understand the natural world and our dependence on natural resources.



What you can do in this project

- * Learn the four elements of life
- * Build your own ecosystem
- * Make a compost to use for your garden and reduce waste
- * Organize a recycling project in your community
- * Learn how plants and animals depend on each other

RESOURCES

Exploring Your Environment, levels 1, 2, 3
Exploring Your Environment Helper's Guide
Science Discovery Series,
Level 2

<http://downloads.cas.psu.edu/4h/PAHabBook.pdf>
www.fourh.umn.edu/resources/plussheets/4H851.pdf
<http://downloads.cas.psu.edu/4h/IncredibleWater.pdf>
www.oznet.ksu.edu/library/ and go to "Environment"
<http://4h.uwex.edu/onlinpro/water.cfm>

Energy

Energy for Home, Farm, & Transportation

Power up! Learn about the various types of energy used today for home heating/cooling, farm machines and farming, and various types of transportation. Explore new sources of energy for our homes, cars, and factories.



What you can do in this project

- * Identify types of energy consumed on the farm or in your home
- * Find out how types of energy are produced, e.g., wind energy
- * Research energy sources for new products such as hybrid cars
- * Learn about the cost of heating an improperly insulated home compared to a properly insulated one
- * Talk to a gas or electric company representative about methods to reduce energy consumption on the farm/in your home
- * Compare energy ratings/consumption on home appliances

RESOURCES

Topics include: wind energy, science discovery
Helper's Guide
Eco Wonders
Eco Adventures
Eco Actions

www.4-hcurriculum.org/projectsonline.aspx/
www.windows.ucar.edu/
<http://projects.4-hcurriculum.org/curriculum/wind/>

Outdoor Adventures

This project introduces 4-H members to camping in Alaska. How to organize for a camping trip, plan menus, the actual experience, camp safety and health and camp activities. This project allows 4-H members to experience being close to nature and to realize their relationship to the natural world about them.

continued on next page

Environmental Science

MATERIALS

1. Members' manual and record
2. Books
 - a. Wild Poisonous and Edible Plants in Alaska
 - b. Staying alive in the Arctic
3. Maps
4. Drawing pad and pencils
5. Camping equipment
 - a. sleeping bag
 - b. cooking utensils
 - c. toilet articles
 - d. clothing
6. Camera
7. Appropriate foods



SUGGESTED REQUIREMENTS:

Level 1

1. Take an overnight camping trip
2. Make a drawing or sketch of a camp site
3. Cook a meal
4. Make a Fire
5. Write a brief, explanatory essay of experience

Level 2

1. Make a scaled drawing of camp site
2. Cook breakfast, lunch, and dinner
3. Take a wilderness camping trip
4. Identify five species of plants and their edibility

Level 3

1. Make a wilderness camping trip combined with a canoeing, horseback riding, riverboat or fishing trip
2. Identify ten species of plants and their edibility
3. Identify five species of wildlife

Level 4

1. Participate in a 4-H camp
2. Write a story

Level 5

1. Read Staying Alive in the Arctic
2. List ten rules for survival in the Arctic
3. Participate in a wilderness winter camping experience
4. Cook your own meals
5. Write a story

RESOURCES

Outdoor Adventure Helper's Guide
 Hiking Trails #1
 Camping Adventures #2
 Backpacking Expeditions #3

4-H Camping in Alaska
 Outdoor Survival Training

Shooting Sports

Learn about safety, proper care and handling of equipment, and marksmanship in the disciplines of BB gun, archery, air rifle/air pistol, and shot gun

What you can do in this project

- * Become familiar with parts of a gun or bow (archery)
- * Learn the fundamentals of marksmanship
- * Learn about safety in the field or on a range
- * Find out about hunting regulations in your state
- * Practice ethical hunting procedures
- * Make a calendar of hunting seasons in your area/state

MATERIALS

1. Firearms and targets
2. Shooting range
3. Qualified adult supervision

OBJECTIVES

1. To expose youth to a variety of shooting skills and opportunities. Rifle—Handgun—Shotgun—Muzzle loaders—Archery
2. To help youth pursue related topics of interest such as hand loading, hunting, taxidermy, game and predatory studies, gunsmithing, and study of renewable resources

AVAILABLE MANUALS

Shooting Sports Leader's Manual

<http://downloads.cas.psu.edu/4h/>

[ShootingLeadersGuide.pdf](#)

<http://www.fourh.umn.edu/Programs/>

[ShootingSports/](#)



Environmental Science & Plant Science

Archery

Archery is a recognized international sport. Members are introduced to the history of archery followed by details of equipment and equipment usage. The project is outlined by a skill advancement approach and members stress and observe the Ten Commandments of Archery Safety.

What you can do in this project

- * Select and care for a suitable bow and arrows
- * Shoot a bow and arrow accurately and safely
- * Relate archery to a life skill in sportsmanship activities



MATERIALS

1. Member manual—4-H Archery
2. Bow, arrows, and targets
3. Safe location for shooting

RESOURCES

Archery Members Manual
Washington 4-H Archery Project

- * Help in a nursery, a city parks department, or a landscape firm

MATERIALS

1. Member Manuals
2. Planting site, seeds, plants, water, tools, etc.

OBJECTIVES:

1. To use good planning for maximum returns from gardening efforts.
2. To prepare soil for planting.
3. To plant and care for vegetables and flowers.
4. To understand about plant growth, insect pests and diseases of plants.
5. To harvest different kinds of plants.



RESOURCES

Gardening Leader's Guide
Exploring the World of Plants and Soils
Leader's Guide
Soils Leader's Guide
Practical Crop Production
See Them Sprout
Let's Get Growing
Take Your Pick
Growing Profits
Suggested 4-H Garden Exhibits
16 Easy Steps to Gardening in Alaska

Gardening

How does your garden grow? Soil, temperature, moisture, and nutrients are common elements in the successful growing of plants. Explore how these elements affect the growth of vegetables, flowers, plants, and shrubs.

What you can do in this project

- * Learn the difference between annual, perennial, and biennial plants
- * Identify different sources for seeds, seedlings, and plants
- * Draw a landscape plan for your yard or another location
- * Demonstrate how to make a terrarium or fresh-cut flower arrangement
- * Grow flowers or vegetables from seeds in a garden
- * Learn the 'whys' of mulches and mulching, compare plastic, sawdust, straw, and none
- * Identify each week in your lawn/garden

Plants and Soils

Both animals and humans rely on plants for food. Explore how this need is met. Learn how plant and soil characteristics, crossbreeding, fertilization, and genetics improve yields. Learn about sampling, testing, and judging plant varieties.

- * Learn how plants reproduce
- * Find out about harvesting and marketing crops
- * Make a seed collection and learn to identify different crops
- * Learn what makes up soil
- * Learn how weather affects plant growth
- * Collect a soil sample for a chemical fertilizer requirements test
- * Interview your local fertilizer dealer

continued on next page

Plant Science & Health and Fitness

- * Learn effective, safe methods of pest control

MATERIALS

1. Member's manuals and record; Leader's Guide
2. A selection of mature plants, seeds, and soil types

OBJECTIVES:

1. Realize plants and soils are exciting
2. Develop awareness of plants and soils as separate entities, just part of the landscape
3. Develop interests for future work
4. Acquire and apply plant-related concepts such as fertilization, cross-breeding, germination, plant nutrition, etc.
5. Get a 'feel' for the many sciences related to soil
6. Explore the many interesting phases of soils as possible careers

RESOURCES

- Exploring the World of Plants and Soils: Member Guide—Beginning
- Exploring the World of Plants and Soils: Plant Reproduction
- Exploring the World of Plants and Soils: Soils
- Exploring the World of Plants and Soils: Plant Growth Factors
- Exploring the World of Plants and Soils: Plant Characteristics
- Exploring the World of Plants and Soils: Growing & Using Plants
- Exploring the World of Plants and Soils: Member Guide



Health—The Fourth “H”

This project covers the value of good health, relationships between good health practices and one's own healthy lifestyles while one is young. It also covers needs that are important to mental and emotional health, helps youth realize the importance of learning and practicing proper dental care early in life, helps members develop an appreciation for dental care early in



life, helps members develop an appreciation for those activities which promote good health and prevent unnecessary diseases, and discusses basic first aid and how it is important for all youths to know the same.

MATERIALS

1. Member's manuals and record; Leader's Guide

OBJECTIVES:

1. To help youth recognize the value of good health
2. How health practices affect their health
3. That growth is unique for each person
4. The value of developing a healthy lifestyle early in life

RESOURCES

- Health Rocks Resource Guide
- Health Rocks Helper's Guide
- Health Rocks community Actions
- Exploring Your body (K-2)
- Discovering Myself #1
- Fun With Friends #2
- Piecing it Together
- Teen Talk (Abstinence Approach)

Bicycle

Bicycles provide convenient travel, good exercise, and recreation. Discover many opportunities available through bicycling. Learn about safety, caring for and maintaining your bike, and riding skills. Plan a fun bicycle adventure or bicycle rodeo

What you can do in this project

- * Learn the parts of a bicycle and how to care for it
- * Learn safe bicycle riding rules, including hand signals
- * Perform safety checks
- * Learn the importance of wearing a helmet and how to fit it
- * Organize a bike Rodeo



Health and Fitness

MATERIALS:

1. Members' Manuals and records; Leader's Manual.
2. Demonstration bicycle and tools
 - a. 5/8" x 11/16" and 1/2" x 9/16" open-end wrench
 - b. 6" and 12" screw driver
 - c. 10" screw driver
 - d. State motor vehicle laws and regulations booklet
 - e. Local cycling ordinances
 - f. Books: Bike Fun and Bicycle Safety Tests and Proficiency Course
3. Own or have access to a bicycle
4. Know how to ride a bicycle

TIME REQUIRED:

Eight to twelve meetings or lessons in a consecutive and accelerated method

OBJECTIVES:

1. Develop leadership talents and work toward achieving the broad objectives of character and effective citizenship
2. Create an awareness of the many recreational and health applications afforded by cycling.
3. Understand the rules of the road and ordinances of the community pertaining to bicycles and bicycle riding and the importance of obeying the laws.
4. Learn elementary care and maintenance of the bicycle and how to select a bicycle that best fits the size and needs of the rider.
5. Demonstrate driving skills needed to adequately and effectively use the bicycle.
6. Develop a clear knowledge of bicycle safety and attitudes leader to proper bicycle riding behavior.
7. Provide opportunities for community service and an outlet for junior and teen leaders to actively support such efforts.
8. Develop an awareness of vocational opportunities and careers that are associated with Bicycles.

RESOURCES

Helper's Guide
Bicycle Helper's Guide
Don't Get Stuck—Fix it Video
Mastering Bicycle Skills
4-H Bicycle Rodeo

- You and Your Bicycle
- Caring for Your Bicycle
- Bicycle Adventures #1
- Bicycle Adventures #2
- Bicycle Adventures #3
- 1- Bicycling Fun
- 2- Wheels in Motion

Child Care

Members learn about child care through six topics where each is presented in three ways: "Talk About It", "Do It", and "Experiences to Share". The babysitting handbook is intended to help youth establish their business of babysitting, taking care of children in a responsible manner with information given about caring for babies to juveniles, safety, discipline, and emergencies.

What you can do in this project:

- * Become a certified babysitter

MATERIALS:

1. Manuals and Leader Guides
2. Boxes, bags, magazines, tapes, glue, and scissors
3. Books for children
4. Supplies like fabric, crayons, string, and cotton balls

OBJECTIVES:

1. Understand more about how children grow and develop
2. Learn a variety of activities to share with children
3. Increase understanding that babysitting is a business with serious responsibilities

RESOURCES

- Caring—A Guide in Community Development Projects
- The Sitter Leader's Guide
- Caring for Young Children in the Home
- What Are Children Like?
- Caring for Young Children—Teen Notebook
- Understanding Children Through Play
- American Red Cross Baby Sitter Training, available through local Red Cross chapters



Health and Fitness

Child Development

Growing up and growing older. Learn principles of how a human grows and develops as an individual and as a member of a family or community. Investigate self-care, family relationships, intergenerational relationships, and differences in individuals and cultures.

What you can do in this project:

- * Select toys, games, or puzzles appropriate for different age groups
- * Create a learning box, toy, or game
- * Identify safety issues in the home
- * Make a family tree



RESOURCES:

Child Development Helper's Guide
 Growing on My Own #1
 Growing With Others #2
 Growing With Communities #3
 Growing All Together

Fitness & Sports

Home run! When you stay physically active, you win! Whether you choose physical activity for one, such as rollerblading, or team activities,

such as softball, there are many ways to be active. Learn skills, rules, and care of equipment to prepare for a lifetime of good physical health.

What you can do in this project:

- * Learn the rules and scoring for a sport such as tennis, golf, softball, or bowling
- * Learn to select proper exercise equipment
- * Organize a game of kick ball or softball for a club meeting
- * Teach soccer, tennis, or badminton to a group of younger club members or an afterschool group
- * Participate in team or individual sports
- * Keep an exercise log or diary
- * Participate in the President's Physical Fitness challenge



RESOURCES:

Staying Healthy
 Keeping Fit

Get Fit! A Handbook for Youth Ages 6-17, President's Council for Physical Fitness website: <http://www.fitness.gov/>

Health & First Aid

Health is physical, but it is also social, emotional, intellectual, and occupational. Learn how you can change as you grow and how to meet the challenges of every stage of development.

What you can do in this project:

- * Learn self-help health skills, such as stress management
- * Learn how to report an emergency
- * Make a first aid kit for your home, vehicle tractor, or boat
- * Take a course to learn basic first aid techniques
- * Make a list of emergency numbers to place by your phone
- * Volunteer to help with a health screening or immunization program sponsored by an agency in your community
- * Make a display about the effects of using tobacco



RESOURCES:

First Aid In Action

Safety

Keep yourself and others around you safe! Involve the entire family in being safety-conscious. Develop the ability to recognize hazards and learn how to correct them. Explore safety issues in these areas: the home environment, chemicals, animals, electrical, fire, recreation, farm machinery and traffic.

What you can do in this project

- * Make a fire exit plan for your family
- * Make a list of emergency numbers to place by the phone or program into the cell phone
- * Do a safety inspection of your house, garage, or other buildings
- * Baby-proof or pet-proof a room in your home

Health and Fitness & Nutrition

RESOURCES

State of Alaska, Dept of Public Health website

<http://www.hss.state.ak.us/dph/>

<http://www.wvu.edu/~exten/infores/pubs/safety.htm>

http://www.kids.gov/k_5/k_5_health_safety.shtml



ATV Safety

The 4-H ATV Safety program helps young people, parents, caregivers and other community members come together to help ensure that every ATV ride is a safe ride. Parents and other adults have a lot of power when they work with young people to support their safe behaviors while riding ATVs. They need to exercise that power by directly supervising and educating young riders.

RESOURCES:

Group Project Manual
ATV Coloring and Activity Book
ATV Rider Handbook
Safety Tips for ATV Riders



Nutrition

Food, fun and flavor! Good nutrition doesn't have to be dull. Learn to experiment with different foods that are both good and good for you? Increase your knowledge of good health through the Food Guide Pyramid. Learn to choose nutritious foods and use proper preparation techniques.

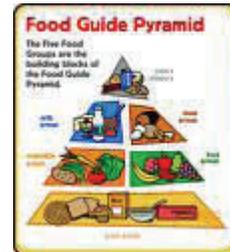
What you can do in this project:

- * Learn about the Food Guide Pyramid
- * Plan a breakfast, lunch, or dinner menu for your family
- * Practice food preparation techniques
- * Participate in the Special Foods contest

- * Make a health snack for a club meeting
- * Figure the cost of a recipe
- * Set a table attractively for a special occasion.

Materials:

1. Members manuals and records
2. Cooking Utensils
3. Ingredients for recipes



OBJECTIVES:

1. Prepare a variety of good to eat meals and snacks in new and different way
2. Recognize the relationship of fitness and food for activity energy

RESOURCES:

Food Helper's Guide
Six Easy Bites—A
Tasty Tidbits—B
You're the Chef—C
Food Works—D

Food Science

In this project, you will learn about food safety and food science. Learn how food goes from the farm to your table. Also learn how to safely prepare foods for yourself and others.

What you can do in this project

- * Make a poster about proper hand washing techniques
- * Buy a meat thermometer and check the temperature of meat dishes before serving
- * Give a demonstration to your group about safe food handling practices for a concession stand
- * Participate in a Special Foods Manual



RESOURCES:

Fight Back website www.fightbac.org/
http://www.fsis.usda.gov/food_safety_education/thermy_for_kids/index.asp

Nutrition & Communication and Expressive Arts

Food Preservation

Good health depends on eating a variety of different foods. People on the go often don't have time to prepare fresh foods. During the winter months, fresh foods are not always available. Learn how to preserve fresh foods by canning, freezing, drying or pickling.

What you can do in this project

- * Learn to preserve fruits and vegetables
- * Practice food preservation techniques
- * Select wholesome, disease-free foods to preserve
- * Learn how to use a pressure cooker or dehydrator
- * Search cookbooks or recipes files for tasty recipes



RESOURCES:

National Agriculture Library (NAL), website:
<http://www.nal.usda.gov/>
 Food and Information Center, website:
[http://www.usda.gov/wps/portal/!ut/p/_s.7_0_A/7_0_1OB?](http://www.usda.gov/wps/portal/!ut/p/_s.7_0_A/7_0_1OB?navtype=SU&navid=FOOD_NUTRITION)
 navtype=SU&navid=FOOD_NUTRITION

1. To provide the opportunity to learn through participation in bread projects

RESOURCES:
 Bread Baking Basics (WSU)

Microwave Magic

The Microwave Magic Series contains exciting activities for you that focus on using the microwave to prepare everything from simple snacks to complete meals!

OBJECTIVES:

- * In the 4-H Microwave Food Preparation projects, you will learn:
 - * how to use knowledge, skills, and better practices relating to personal health and safety;
 - * how to increase positive activities that promote physical health and well-being; and skills such as decision-making, getting along with others, planning and organizing, and responsibility.



RESOURCES:

Helper's Guide
 Bag of Tricks-A
 Micro Magicians-B
 Amazing Rays-C
 Presto Meals-D

Bread Project

Members Learn to prepare delicious and attractive breads, to know the science related to bread making, and the place of breads as a basic item in the diet. Through the bread program, a member can use many different methods in their study of breads and cereals.



MATERIALS:

1. Member's record
2. Bread baking ingredients

OBJECTIVE:

1. To introduce 4-H members to the world of breads
2. To teach members the importance of the bread-cereal group to today's nutrition
3. To produce confidence through the use of demonstrations

Arts & Crafts

Explore art and design experiences. Learn to apply the elements and principles of art to various media, such as pencil, clay, fiber, glass, leather, metal, paper, plastic, textiles, and wood. Older youths can enlarge their experience by further developing their skills, by providing leadership to younger members, or by making connection to careers in the arts.



Communication and Expressive Arts

What you can do in this project:

- * Learn about the elements and art principles of design.
- * Create 2-dimensional and 3-dimensional art work
- * Experiment with different media such as clay, paper, wood, etc.
- * Learn about connecting art to careers, such as communication, technology, culture, science, and exhibition.
- * Study an artist and his/her style or technique. Experiment with that technique or style.

RESOURCES:

A Palette of Fun
 Sketchbook Crossroads: Drawing, Fiber and Sculpture
http://www.colorado4h.org/project_resources/gnr-projects/visarts/index.shtml
<http://www.n4hccs.org/projects/visualarts/Other/SampleRequirements.pdf>

Express Yourself!

Speaking, writing, media, poetry, and prose communication inform, persuade, entertain, and provide conversation. Learn to select the type of communication that best conveys a message. Discover effective ways to delivery ideas.

What you can do in this project:

- * Learn about organizing information to be presented
- * Prepare and give a speech or an illustrated talk
- * Develop a pleasing personal appearance and manner before an audience
- * Learn about career, job, and leisure opportunities in the communications field
- * Put together a PowerPoint presentation



RESOURCES:
 Communications Took Kit (loan only)
<http://web1.msue.msu.edu/4h/toolkit.html> (took kit website)

Home Environment

Our homes and apartments are our private spaces but also places we share with family and friends. Discover how to make living spaces more comfortable, organized, and inviting. Learn about color, space planning, fabrics, and furniture.

What you can do in this project:

- * Plan and create a storage center
- * Arrange or rearrange furnishings in a room using principles of design and function
- * Make a room plan to scale for a room using a template and scale symbols to represent furniture
- * Learn about color, texture, line, and shape
- * Create a swatch board with samples of paint, wallpaper, fabric and floor coverings



RESOURCES:

<http://msucares.com/pubs/publications/p1662.htm>
<http://www.utextension.utk.edu/4h/projects/linedesign.htm>

Graphic Design

Graphic Design is a creative process that utilizes art and computer technology to communicate ideas. It begins with a message that is transformed into visual communication and transcends words. Learn how the graphic design uses color, type, symbols, and photography to create and manage the production of images designed to inform and persuade a specific audience.

What you can do in this project:

- * Make eye-catching educational posters and displays
- * Explore new materials that can be used for special effects on posters and in printed materials
- * Do a study of color, lettering styles, and/or format spacing

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Communication and Expressive Arts

- * Create a brochure or poster to advertise a school or 4-H event
- * Give a talk on how to achieve a special effect seen on many print pieces today
- * Create a design for a postage stamp, magazine cover, logo, business card, or shopping bag.

RESOURCES:

Portfolio Pathways: Painting, Printing and Graphic Design

Computer software such as Adobe Illustrator, Photo Shop, InDesign



Music

Create form and meaning through rhythm, meter, and harmonics with voice and instruments. Discover how music develops physical skills, mental abilities, creative capacities, and social skills. Participate by listening, performing, composing, teaching, or making music instruments, either individually or in a group.

What you can do in this project:

- * Participate in Performing Arts Camp
- * Write your own music
- * Learn to play an instrument
- * Learn about the history of dance
- * Choreograph a dance
- * Make a poster identifying different types of musical instruments



RESOURCES:

<http://www.extension.iastate.edu/Publications/4H620MP.pdf>

The Music of Sound: The Neanderthal Jam

<http://whyfiles.org/114music/4.html>

"I Hear America Singing" (from PBS)

www.pbs.org/wnet/ihas/

Jazz Kids: www.pbs.org/jazz/kids

PlayMusic: www.playmusic.org

Instrument Encyclopedia:

www.si.umich.edu/chico/instrument

Photography

Photography is part art, part science, and part communication. Learn to capture events, ideas, and situations as a record for others to enjoy or study.



What you can do in this project:

- * Learn how to pick a good subject
- * Learn about different types of cameras and video equipment
- * Explore artistic principles in the composition of still and moving photography
- * Learn about different kinds of film
- * Try different kinds of special effects
- * Learn to shoot photos that tells stories and illustrate ideas

RESOURCES:

Photography Leaders' Guide—Unit 1

Adventures with Your Camera Unit 1

Adventures with Your Camera (8-10 years)

Adventures with Your Camera (11-14 years)

<http://pa4h.cas.psu.edu/102.htm>

Cultural Education

Discover how understanding individual and cultural differences leads to greater respect for other people and a greater appreciation of one's own heritage.

What you can do in this project

- * Make a family tree to learn about your own heritage
- * Find out what people wear, what they eat, and what games they play in other cultures or countries
- * Go on an exchange trip to another state or visit another community
- * Host an international Student



RESOURCES:

Latino Cultural Arts: Bilingual Group Activities

"...And My World..." Unit 1

"...And My world...." Unit 2

Community Action

Theater

Experience how to create form and meaning with voice, gestures, and body movement. Explore role-playing, mime, staged presentations, and rhythmic and harmonized body movement of spontaneous or controlled nature, both individually and in a group.



What you can do in this project:

- * Learn about different types of performances—plays, recitals, concerts, musicals
- * Make puppets and give a puppet show
- * Try improvisation
- * Learn about clowning
- * Write a play or skit and perform it for an audience, such as a preschool or elder care home
- * Learn how people use body language to communicate

This project introduces members to the history of clowning and emphasizes make-up application, costume development, methods of communicating as a clown, clown etiquette and performance ideas. The clowning project can be incorporated into any 4-H project, can be used for teaching and demonstration, as a special community service, or to promote the 4-H program.

MATERIALS:

Member Manual—The Art of Clowning
 Make-up and costume materials
 Performance Props

OBJECTIVES:

1. Develop physical and performing skills
2. Develop interpersonal skills and relationships with others
3. Strengthen self-confidence



RESOURCES:

Leaders Guide to Clowning (MI)
 Guiding the Journey Helper's Guide
 Theater Arts: Helpers Guide
 Members Guide to the Art of Clowning (MI)
 Journey into the Imagination #1
 Soaring Into Action #2
 Quest for Expression #3
 Voyaging Beyond
 Theater Arts: Play the Road
 Theatre Arts: Become a Puppeteer
 Theater Arts: Set the Stage
www.creativedrama.com/theatre.htm

COMMUNITY ACTION

Public Adventures

This guide helps teach problem solving by turning creative thinking into positive action. You are offered step by step instructions for letter writing, interviewing, fundraising, speech making, media coverage, and more.

Public Adventures teaches 4-Hers about changing a piece of the public world, discovering the possibilities of democratic citizenship and building a commitment to taking action in new and exciting ways. Youth plan a project that will create, change, or improve. Available through National 4-H Council.



The Helper's Guide will help you support youth set goals and complete activities, as well as providing resources for the member's to use in completing the series. Available through National 4-H Council.

RESOURCES:

Citizen Guide's Handbook
 Public Adventure—Adventure Kit

<http://4h.uwex.edu/onlinpro/documents/citizenshipdane.pdf>
<http://4h.uwex.edu/onlinpro/adventures.cfm>

Service Learning

Discover your community and find ways to become involved in activities to help make the area a better place to live.

What you can do in this project

- * Learn about community organizations
- * Organize a community improvement project, such as planting flowers and trees
- * Be a helper at a community event, such as the Special Olympics or a fundraiser for charity

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Community Action & Leadership

- * Collect food, clothing and/or furniture for families who have experienced a fire, flood or other emergency

RESOURCES:

Helper's Guide
Agents of Change (w/CD)
Raise Your Voice (w/CD)

<http://florida4h.org/projects/community.shtml#General>
<http://www.ctahr.hawaii.edu/4h/Service-Learning/>
<http://www.utextension.utk.edu/4h/sos/index.htm>
<http://www.utextension.utk.edu/4h/SOS/resources/index.htm>



Citizenship

What does it mean to be a citizen? Learn about the rights and responsibilities of belonging to a family, community, state, nation, and the world. Explore how democracy works and how to participate in the democratic process to bring about change.

What can you do in this project:

- * Attend a public meeting, such as city council, school board, or borough assembly meeting.
- * Become informed about a local issue, collect news articles, and opinions about the issue.
- * Make a poster encouraging people to register and to vote.

Unit 1 focuses on self-identify, self-acceptance, and relations with family and friends

Unit 2 takes the 4-Her's beyond the family and close friends into the neighborhood and school

Unit 3 helps a 4-H'er learn to function in organized groups so he/she can be a more effective participant

Unit 4 opens the doors for community understanding and involvement. It is a multi-year unit and may be continued as long as a 4-H'er wishes.

Unit 5 teaches about family heritage through developing a family tree.

Unit 6 includes discussions on governmental systems, laws, and voting

Unit 7 will help 4-H'ers who are interested in international study and experiences explore their areas of interest.

MATERIALS:

1. Members manuals
2. Leader's Guide



OBJECTIVES:

1. Develop the skills necessary for intelligent participation in group decision making.
2. Help members understand the rights and responsibilities of membership within the family, neighborhood, community, state, nation, and world and develop a willingness to assume them.
3. Develop an understanding and appreciation for other cultures.
4. Develop an appreciation for one's family, community, state, and national heritage.
5. Develop an insight-into the principles, processes, and structures of government.
6. Demonstrate respect for the rights of others through responsible action.

RESOURCES:

Citizenship Guides Handbook
Exploring Citizenship Leader's Guide
Unit 1: Me, My Family & My Friends
Unit 2: My Neighborhood
Unit 3: My Clubs & Groups
Unit 4: My Community
Unit 5: My Heritage
Unit 6: My Government
Unit 7: My World

<http://www.utextension.utk.edu/4H/projects/citizenship.htm>
<http://4h.uwex.edu/onlinpro/citizenship.cfm>
<http://www.ca4h.org/citizenship/CitWeb.asp>
http://www.lsuagcenter.com/en/4H/about_4H/programs/citizenship/Citizenship+Project+Books.htm

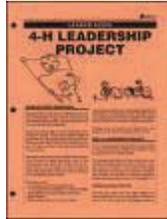
Leadership & Workforce Preparation

Leadership

Develop your leadership potential through understanding yourself. Improve your communication and decision making skills. Learn about managing and working in groups. Leadership focuses both on personal development and being of service to others.

What you can do in this project:

- * Participate in leadership conferences or camps
- * Become a member of a committee or board in your community (e.g., 4-H horse committee, church youth education planning committee)
- * Learn to deal with conflict and develop skills to resolve conflict
- * Learn how to work effectively as a member of a team
- * Plan and carry out a productive meeting
- * Think through how to make decisions



RESOURCES:

- Leadership Mentor Guide (K-5)
- Leadership Mentor Guide (6-12)
- Leading Groups Book 4
- Leadership Workbook (3-5th)
- Leadership Journal (6-8th)
- Leadership Portfolio (9-12th)
- Exploring the Treasures of 4-H, Youth Guide
- Exploring the Treasures of 4-H, Helpers Guide (Leadership for) Younger Members Book 1
- (Leadership for) Older Members Book 2
- Working Within Groups Book 3
- Leadership—Skills You Never Outgrow

- <http://4h.uwex.edu/onlinpro/leadership.cfm>
- <http://www.utextension.utk.edu/4h/projects/leadership.htm>
- http://www.colorado4h.org/project_resources/gnr-projects/leadership/index.shtml

Leadership Hobbies and Collections

How do you spend your spare time? Do you have a hobby or collection? Share your special interest with others by exhibiting your collection or examples of things you have created.

What you can do in this project:

- * Pick a hobby by or start a collection that interests you
- * Learn about ways to store, display, and preserve your collection
- * Organize a hobby show for clubs in your area
- * Plan how you can will organize your collection and make an inventory of it
- * Learn to assess the value of your collection as an investment of the future
- * Teach a friend or club member how to participate in your hobby

Consumer Savvy

What kinds of things do you buy? What is your budget? How do you decide what to spend your money on? Learn to be a good consumer by defining the problem, gathering information, evaluating alternatives, and making decisions. Find out how to make better decisions about wise use of resources such as your time, money, and talents.



What can you do in this project?

- * Learn the difference between needs and wants
- * Development a budget, a spending plan, and a savings plan
- * Learn about benefits and drawbacks of credit
- * Do a price comparison of three or more items in a class
- * Make a poster of magazine ads and how they influence buyers

RESOURCES:

- Consumer Education Helper's Guide
- The Consumer in Me #1
- Consumer Wise: Grade 6-8 #2
- Consumer Roadmap #3

Leadership & Workforce Preparation

Financial Champions

Big or small — businesses create jobs and provide products and services. Learn how competition, supply and demand, and finance are important concepts in business, and how personal, social, and ethical decisions are also important.



What you can do in this project:

- * Study currency and foreign trade
- * Describe a monopoly
- * Select a commodity or stock and graph the pricing over a period of time, e.g., two months
- * Examine businesses in your community. Determine which products or services are not available.

RESOURCES:

Personal Finance Helper's Guide
Money FUNdamentals #1

- * Learn about different types of businesses
- * Learn the meaning of line of credit, cash flow, investment, and public offering
- * Work with a group to create a product and develop a business plan to sell it

RESOURCES:

Be the E Helper's Guide
Get in the Act Helper's Guide
Be the E Activity Guide
Get in the Act Youth Guide

Workforce Prep

What's in your future? Explore the job and career opportunities and learn about the value of education and job preparation. Identify your personal interests, skills, and abilities through learning about the world of work, education, and job training.

What you can do in this project:

- * Make a list of jobs or careers that interest you
- * Learn what skills and experiences are needed for a particular job(s)
- * Interview people whose careers interest you. Tour their work site
- * Job shadow or intern



Be an entrepreneur! Learn to start a business and develop a complete business plan. Develop a way to market your ideas.

What you can do in this project:

- * Interview an entrepreneur or small business owner in your community
- * Take a tour of a local business

Alaska General 4-H Calendar of Activities or Events



October

New 4-H Year Begins
First of October
Mid-October

End of October

Enrollment begins
Alaska Volunteer Leader's Forum
"Make a Difference Day"
National 4-H Week
NAE4HA National Conference
Achievement Program

November

First of November
End of November

ES-237 Report Due to State Office by Agents
National 4-H Congress

December

First of December

Leader's Appreciation Dinner
National 4-H congress in Washington, D.C.

January

First of January

4-H Western Roundup
J.C. Penney Scholarship Applications Due to
State Office (for Volunteer Leaders)

February

End of February

Western Region Leadership Forum

March

Mid-March

District baking Contest
Pillow Patrol

April

All Month
First of April
Mid-April

National Volunteer Recognition Month
National 4-H Congress in Washington, D.C.
National Volunteer Week
Scholarship Award Applications Due in
District Offices
Presentations Contest
Alaska Leaders Forum

May

LABO Applications Due to District Offices

June

Mid-June

Teen Leadership Camp
Enrollment deadline

July

Mid-July

4-H Camp
LABO Delegates Arrive
Fair Tickets

August

All month
End of August

District Fairs, District Invitations & Auctions
4-H Expo

September

Record books/District Awards Judging

"To Make the Best Better"

**MAT-SU/COPPER RIVER DISTRICT OFFICE
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The Cooperative Extension Service (CES) is a public service educational branch of the University of Alaska Fairbanks. CES takes scientific information from the University and helps Alaskans apply that knowledge at home and on the job.



Part of Alaska's communities since 1930, 4-H is the largest youth organization in the country. Youth—grades K–12—learn life skills that bolster strong leadership, healthy self-esteem, responsible citizenship, and active community involvement.

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