

Projects for 1986-87

A supplement to the Kansas 4-H Journal

Butterflies-wildflowers go together



by Joan Istas
Kansas 4-H Journal Editor

Have you ever experienced the thrill of capturing your first spicebush swallowtail butterfly, constructed your own butterfly garden or dared to store insects in your mother's freezer?

Twelve-year-old Grant Welton has in the 4-H entomology project.

As a small child, Grant was fascinated with the family's butterfly wall hangings. Thus, it seemed natural for him, at the age of 8, to enroll in the entomology project. Today, he says, it's his favorite project.

"I just really like insects and butterflies," Grant says.

The spicebush swallowtail was the first butterfly Grant captured.

"I caught it in the backyard next to my butterfly garden. I was so thrilled when I found out it was the spicebush," he says.

Grant especially likes butterflies, and moths and beetles are favorites, too.

"I like beetles. There are so many beetles. It's impossible

to get every single one in North America.

"When you think of moths, you think of ugly little brown things. They become pink and blue and green. They're so neat. I have one moth that's checkered yellow, orange and blue."

Moths in his collection include the rarest moth in North America, the Luna Moth.

When Grant first enrolled in entomology, he used nets made from mosquito netting sewn onto badminton rackets. They kept wearing out, but there always was more mosquito netting and another old badminton racket in the basement.

This year he purchased his first butterfly net.

Grant says the best way to catch a butterfly is to sneak up on it. He catches most butterflies with a net, but there was one he captured by dropping a glass jar over it. And a friend caught a dragon fly in his hand while camping at Rock Springs Ranch. Grant brought that insect home in a paper cup.

The Riley County 4-H'er catches leaf hoppers in the grape arbor in the backyard, and butterflies that alight in his butterfly garden will likely end up pinned in Grant's entomology collection.

Grant entices butterflies into the garden with plantings that attract the insects such as the butterfly plant, butterfly bush, purple coneflower, petunias, marigolds, daisies, and verbena. A limestone walk in between the plants invites the butterflies to alight and sun themselves.

A black light set up on two sawhorses in the backyard in the summertime also attracts insects.

Grant kills the insects in a killing jar that contains chloroform. Then they go into the freezer until he's ready to pin them.

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Rabbit's escape hits the headlines

by Joan Istas
Kansas 4-H Journal Editor

Buddy is Reno County 4-H'er Steve Maskill's favorite rabbit. Buddy also was Steve's first rabbit.

Steve says he chose the Castor Rex because he wanted a rabbit that looks like a rabbit. The Castor Rex breed resembles the wild cottontail in color.

Steve brought Buddy home when she was a month old and kept her in the house just like he would a kitten. She was later evicted from the house when she chewed up the window curtains.

The Nickerson 4-H Club member says Buddy is his favorite rabbit because she's his best rabbit. Perhaps that's because Buddy was awarded a blue ribbon at the Kansas State Fair in Hutchinson two years ago.

Buddy obtained notoriety when an article in the *Hutchinson News* told of her 1½-month escape from her cage. Most of the Maskill family had given up hope that they would ever see Buddy again. But not Steve.

"I thought I would get her back," he says confidently.

The number of rabbits Steve has continues to grow. Last year he exhibited four of his ten rabbits at the Kansas State Fair.

The 9-year-old 4-H'er enjoys his rabbits, but sometimes finds it difficult to care for them.

"They're hard to take care of in the winter because you have to thaw the water in the crocks," he says.

Steve also takes chickens, bucket calves, sheep and ceramics as projects and is active in his 4-H club.



Steve Maskill and Buddy

Butterflies and wildflowers (Continued from Page 1A)

"I'm lucky my mom lets me keep them in the freezer," he says.

Grant tries to pick the best specimens for his entomology box even if that means gluing on a head from what his father calls "Grant's box of spare parts."

When pinning insects, he tries to make them look natural. He has pinned over 100 insects for display during the four years he has been in the project.

Grant's love of butterflies also is responsible for another interest — the study of wildflowers.

"What really got me started studying wildflowers was seeing all the butterflies around the butterfly milkweed. I saw other wildflowers and wondered about them. I wanted to identify them and learn about them."

Grant took wildflowers as a self-determined 4-H project. With the help of his parents and a wildflower book, he has identified, pressed and displayed wildflowers.

He says he has learned a lot about wildflowers. "I learned once they're picked they wilt pretty rapidly, that they usually bloom at different times

in the spring or late summer and how they attract butterflies.

Grant intends to continue the study of wildflowers as a self-determined 4-H project.

"I think wildflowers are kind of

neat," he says. "Nobody planted them. They just kind of grow by a seed that was dropped."

And wildflowers and butterflies just seem to go together.

Awards presented for talks

Pawnee County encourages 4-H club members to present talks and demonstrations at County Club Days by offering special awards for the top project talk or public speaking presentation and the top demonstration or illustrated talk.

The Jason and Brooke Meckfessel Memorial provides a trophy in each category and the Pawnee County 4-H Foundation awards a clock radio in each category.

New categories of extemporaneous speaking for older club members and show and tell for 7- and 8-year-olds also encourages increased involvement in public speaking.

In show and tell, 4-H'ers present a simple project talk and are awarded participation ribbons. Participants in extemporaneous speaking draw for the subject they will speak about. The 5 to 10 sub-

jects in the draw include: "Why is the family important in 4-H?" and "How does 4-H help prepare you for everyday living?" 4-H'ers have five minutes to prepare the speech and are awarded blue, red and white ribbons.

Offered for the first time this year, participation in extemporaneous speaking was limited. Show and tell participation continues to increase in popularity.

Winning talks and demonstrations were taped this year and tapes are available for check out through the county Extension office. This also encourages presentations of talks at club meetings, says Bob Frisbie, county Extension director.

"I think the two things that make 4-H unique are that it teaches kids how to speak in front of others and how to conduct parliamentary procedure."

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Terry Demel (right) shows Bill Abrams, also a Cheyenne Eagles club member, his fantail pigeons.

4-H'er likes the pigeon project

Barton County 4-H'er Terry Demel raises fantails for his 4-H project — fantail pigeons, that is.

Fantails are a bluish black pigeon with a tail that spreads out like a fan. They're judged on how much they strut and how they hold their tail, says the Cheyenne Eagles club member.

"I enjoy watching them. I like how they fly. Their tail looks like a rectangle."

Terry, who exhibited fantails at the Kansas State Fair in Hutchinson last year, has been raising pigeons for a 4-H project for six years now. He got interested in fantails when a friend of his sister gave

him two of the birds. Today he has three fantails he's named Bluey, Brownie and Speedy.

"It's amazing how fast pigeons grow. Two days after they're born, they double their weight," he says.

Terry encourages other 4-H'ers to get involved in the pigeon project. Pigeons aren't expensive, he says. For instance, fantails can be purchased for just \$5 each. Pigeons don't take much space. They don't produce too much of an odor and they don't take much trouble, he says.

Do you want to be a 4-H'er?

Do you like to learn new things, explore new areas? Are you interested in photography, geology, foods, plants and animals? Do you like reptiles, computers or making arts and crafts? Do you enjoy making new friends, camping, traveling to new places, leading others?

4-H is developing life skills: building self-confidence; learning to make decisions; developing an inquiring mind; developing concern for the community; and relating to others.

4-H is for boys and girls 7- to 19-years of age. It's for city kids and country kids.

To find out more about 4-H, fill out this coupon and mail it to your county Extension office. 4-H may be for you.

Name _____

County of Residence _____

Address _____

Phone _____

Information desired _____

Additional copies of project selection guide can be purchased for 35 cents.

Brought to you by the 4-H Foundation

Funds from the Kansas 4-H Foundation are again bringing the project selection guide to every *Kansas 4-H Journal* subscriber. The project selection guide was first published in the *Journal* in 1985.

Author books

Miami County Busy Beavers reading project members reached a goal that many aspiring writers dream about but never attain. They are published authors.

The 4-H members wrote their own stories and illustrated them in crayon and colored pencil. The stories were bound into hardback books.

The 4-H'ers also toured the Emporia Gazette and the William Allen White Library in Emporia. At the newspaper, made famous by White, the group learned about the Kansas editor from members of the newspaper staff. Five guides showed the group how the paper is put together now and how it was printed long ago.

At the library, members saw pictures and artifacts owned by White, the original manuscripts of his books, articles and editorials, and the Mary White room, which commemorates White's daughter, who died at the age of 16.

The group also toured White's home and visited Peter Pan Park, which features a memorial to White and a statue of White.



Record keeping can be fun when done as a group project.

Record keeping can be fun

by Joan Istas
Kansas 4-H Journal Editor

Record keeping can be fun, believes Gayle Studer, records and awards coordinator for the Riverview 4-H Club of Wichita.

Mrs. Studer accepted the position of records and awards coordinator shortly after her son, Brian, now 11, joined the club.

"It was something I was interested in, something I believe is important," she explains her acceptance. "The record book presents the total picture of 4-H work. It completes the 4-H year."

Mrs. Studer, who also is a 4-H assistant for the Sedgwick County Extension Service, explains that record keeping is an important life skill. The record keeping skills 4-H'ers learn will help them in keeping records for income tax purposes, Mrs. Studer says.

Few of the members of the Riverview 4-H Club were completing their record books at the time Mrs. Studer became the records and awards coordinator. When she scheduled an afternoon and evening session at the end of the 4-H year to help club members with their records only one club member came.

This year with 41 members in the club, most of them first and second year members, Mrs. Studer took a different approach.

Record keeping would not be a last minute exercise. It would be a regular part of the club meeting and the teachers would be the six Junior Leaders in the club.

"4-H is not a parent organization," Mrs. Studer explains the involvement of the Junior Leaders. "If their peers, the Junior Leaders, those they look up to, tell the kids to complete their records, nine out of ten are going to do it."

The Junior Leaders met with Mrs. Studer at the beginning of the 4-H year for a weiner roast and planning session. Each

Junior Leader agreed to appear as Chris Clover at a club meeting to tell members about record books. A skit involving all Junior Leaders will conclude the year. Mrs. Studer and the Junior Leaders set a goal to get 100% participation from all club members.

Records and awards skits are presented after recreation and before the announcements at each club meeting. Leaders are encouraged to have project meetings so kids have something to write about.

A club achievement night, where pins are awarded, is held in November. As pins are awarded, Mrs. Studer explains how the 4-H'er earned the pin. Papers listing requirements to obtain pins are passed out to new members.

Also at the beginning of the 4-H year, kids are told why record books are important and what they learn by completing them.

The personal page is explained at one session and club members asked to bring their completed personal page to the next club meeting. Those who do are rewarded with a piece of candy.

The permanent pages show growth over the years, 4-H'ers are told.

The record books of two older 4-H'ers were presented for show and tell. Again 4-H'ers were asked to go home, bring their permanent record up to date and bring it to the next meeting. Those who did so were presented with a 4-H membership pin.

The six Junior Leaders, Dennis Barnes, Brian Collins, Heidie Lindenmuth, Tiffany Nickel, Erin Reichenberger and Darla Snyder, ended the year in August by presenting a skit about the importance of record books.

So far participation has been good; kids are keeping their record books up to date, Mrs. Studer says.

Project materials

Some project materials listed in the project selection guide must be purchased. Also, project material is not available for all projects listed.

Consult your county Extension office about materials available and cost.

Named to Planning committee

Leavenworth County 4-H'er Kevin Wake has been selected to serve on the planning committee for the 1987 National 4-H Conference.

Kevin, who was a 1986 National 4-H Conference delegate to Washington D.C., will participate in a planning meeting for the 1987 conference in Chevy Chase, Md., in July. In April of 1987 he will help conduct the 57th National 4-H Conference.



Delano 4-H Club leader Diane Degood discusses coming club activities with Sedgwick County 4-H Agent Bill Fultz.

Parental involvement is stressed

by Joan Istas
Kansas 4-H Journal Editor

Getting parents involved in club activities is helping keep 17 new members of the Delano 4-H Club of Wichita in 4-H.

The community club increased from 23 to 40 members this year when kids from three families in the club brought their friends to club meetings and they, in turn, brought their friends to meetings.

Most club members are 10, 11 and 12-years-old.

"We've had to work hard at getting the new members involved to get to know each other. That's one of the reasons we've done lots of things to get parents involved," says community club leader Diane Degood.

The club year begins with a get-acquainted session for both kids and parents. A popular get-acquainted activity is to find a partner then introduce that partner to the group by telling something

about him.

As a special family event this year, every family told about an activity they do together through charades. One family skis together; another plays softball; and still another goes motoring.

Parents Night features activities done by the parents. A family potluck at Christmas time and a family picnic encourage family involvement.

Recreation, which follows roll call, the business meeting and the program at each meeting, include activities for both parents and kids. Sometimes the family participates in recreation together and sometimes parents and kids have separate recreational activities.

"We do have a lot of fun at recreation," Mrs. Degood says. "It's a time to relax and get acquainted. New members often go to a meeting and just sit. The kids need to be involved."

Attendance by parents at meetings is not a problem, Mrs. Degood says. They see other parents at club meetings and

come, too.

Parent participation keeps kids active because parents are aware of what's going on and can help their child at home, Mrs. Degood says.

Parents also are involved in a club parents committee and in county-wide 4-H activities.

"Families in the Delano 4-H Club are working together and getting to know each other," Mrs. Degood says.

Booths are winners

Booths built by Cottonwood 4-H Club members of Wabaunsee County have captured three grand championships and one reserve grand champion award the last four years.

The booths, displayed at the county fair in Alma, have promoted 4-H with such themes as "Catapult Yourself into 4-H;" and "Picture Yourself in 4-H."

Drawings needed for the booth usually are done by club member David York.

Record keeping is a life skill

Record keeping is an important life skill, and, thus, a valuable part of 4-H project work, says Steve Fisher, state 4-H specialist.

Fisher notes that all adults have to keep records whether it's making out a budget, a menu, planning a calendar or keeping records for income tax purposes.

Fisher, however, notes that it is important to keep 4-H records in perspective. When record keeping becomes the end instead of a means of learning, the whole 4-H program is thrown out of balance, he says.

Records of 4-H work may be kept on one or more of the following forms:

Kansas 4-H Record — useful for many different projects or

for helping boys and girls plan other 4-H experiences and evaluate the results. This record can be used for self-determined projects.

Project Record — many projects have project record forms designed to help the member with his project.

Personal Page — the 4-H'er can record his experiences during the year in addition to the specific project records.

Permanent Record — the summary of all projects, exhibits, offices held, events attended and activities for the entire year is made on the permanent record.

Leaders should obtain records from the county Extension office and give them to 4-H'ers as they are needed.



Arts and crafts is a popular 4-H project. This 4-H'er learned how to work with stained glass at 4-H Discovery Days. Youth 7 to 19 years of age are eligible for the 4-H program.

Agronomy

100

Soil and Water Conservation

If you choose soil conservation for your major project, plan and complete three or more recommended soil conservation practices adapted to the farm such as:

Test soil for lime and fertilizer requirements. Learn about land classification and use. If your county has a published soil survey report, use it to determine the soil types on your home farm.

If your emphasis is water conservation, plan and carry out three or more practices, such as:

Measure rainfall and keep a record of the amounts.

Lay out and build a pond to provide water for household use, livestock, irrigation, or recreation.

Protect ponds from silting and from pollution.

Use stubble mulch if it is recommended for the area.

Plant and till crops on contour where practical.

Lay out and build waterways and seed them to grass.

Build and maintain terraces.

Develop irrigation where water is available.

Land Judging and Homesite Evaluation

This is a related activity that you may want to consider with this project.

Get a copy of MF-224, *Instructions in Land Judging and Homesite Evaluation*.

102

Crop Production and Management

Complete the basic phase each year of planting and producing at least five acres of one of the common field crops grown in Kansas (wheat, corn, grain sorghum, corn and sorghum for silage or forage, soybeans, new seeding alfalfa, field beans, sugar beets, etc.)

Optional Exercises

Select and complete each year three optional learning exercises listed in the Crop Production and Management member's manual. You may repeat any one of the exercises for no more than three years and must have at least one new optional exercise each year.

Record data and learning experiences on the Crop Production record sheet and write a short report on what the project has taught you.

If you do not live on a farm, you may use land owned by someone who would make it available for this project.

Crops Contest

This is a related activity that you may want to consider with this project. You will learn to analyze seeds of wheat, corn, grain sorghum, and soybeans for weed and other crop seeds. You will learn to identify and categorize 50 plant specimens from seed and/or the plant. Ask your county agent for information about this contest.

103

Exploring the World of Kansas Soils

This is a basic, introductory project

dealing with soils. It is designed as a one or two year project for younger members or those older members who desire to learn some basic principles about soils.

You will learn what soil is and how it is made.

Learn how to determine soil texture and soil water.

Learn about life in soil and how to use soil surveys.

Learn about soil testing and land judging.

You will choose at least five of the ten lessons outlined in the manual to complete. You may want to do all of them. Keep records and answer questions in the manual. You may want to give a demonstration and prepare an exhibit for your county fair. You do not need to live on a farm to take this project.

Land Judging and Homesite Evaluation

This is a related activity you may want to consider.

Get a copy of MF-224, *Instructions in Land Judging and Homesite Evaluation*.

104

Weed Identification and Control

The Weed Identification and Control program supplements other projects. Any 4-H'er may participate in it, but those enrolled in Field Crops, Forestry, and Horticulture, are especially urged to include the program as a part of their project work.

Make a standard size (13" x 18") wooden plant press.

Collect, identify, press, mount, and label 15 or more weeds from the approved list.

Prepare a list of weeds, mounted, showing common name, scientific name, and other requested information.

Crops Contest

You may want to consider this activity to analyze seeds of wheat, corn, grain sorghum and soybeans for weed and other crop seeds. Learn to identify and categorize 50 plant specimens from seed and/or the plant. Ask your county agent for information concerning this contest.

Arts

Learning experiences:

Creative self-expression.

Principles of design.

Skills of using various media.

120

Crafts

Explore and observe the beauties in nature. The basis for design principles is demonstrated in nature.

Collect leaves, flowers, driftwood, shells. Use them to make decorative objects.

Experiment with available materials, using imagination and creativity.

Examples of items to do:

Make a cornshuck object.

Make a leaf print.

Make a mobile, using twigs and weed pods, etc.

Dry flowers and make a flower picture.

Make a piece of jewelry from stones and copper wire.

121 - 127

Skill Arts

Example of skill art areas:

Sketching, drawing, and painting.

Carving.

Ceramics.

Leather.

Fabrics and fibers.

Stitchery.

Spinning and dyeing.

128

Cultural Arts

Study and report on classic and contemporary forms such as:

Visual art — study and share information on artists and art galleries in Kansas. Visit an art gallery. Study arts of a particular period in history or a particular people.

Music — Listen to music of specific composers. Study background of composers. Share with others.

Literature — Read books. Explore authors' backgrounds and what inspired them to write.

Explore art forms related to a particular culture or era, e.g.:

Renaissance.

The New Republic.

American Indian.

Black American.

Mexican American.

Personal Heritage.

Heritage of another American culture.

Heritage of a region of the U.S.

Beef

135

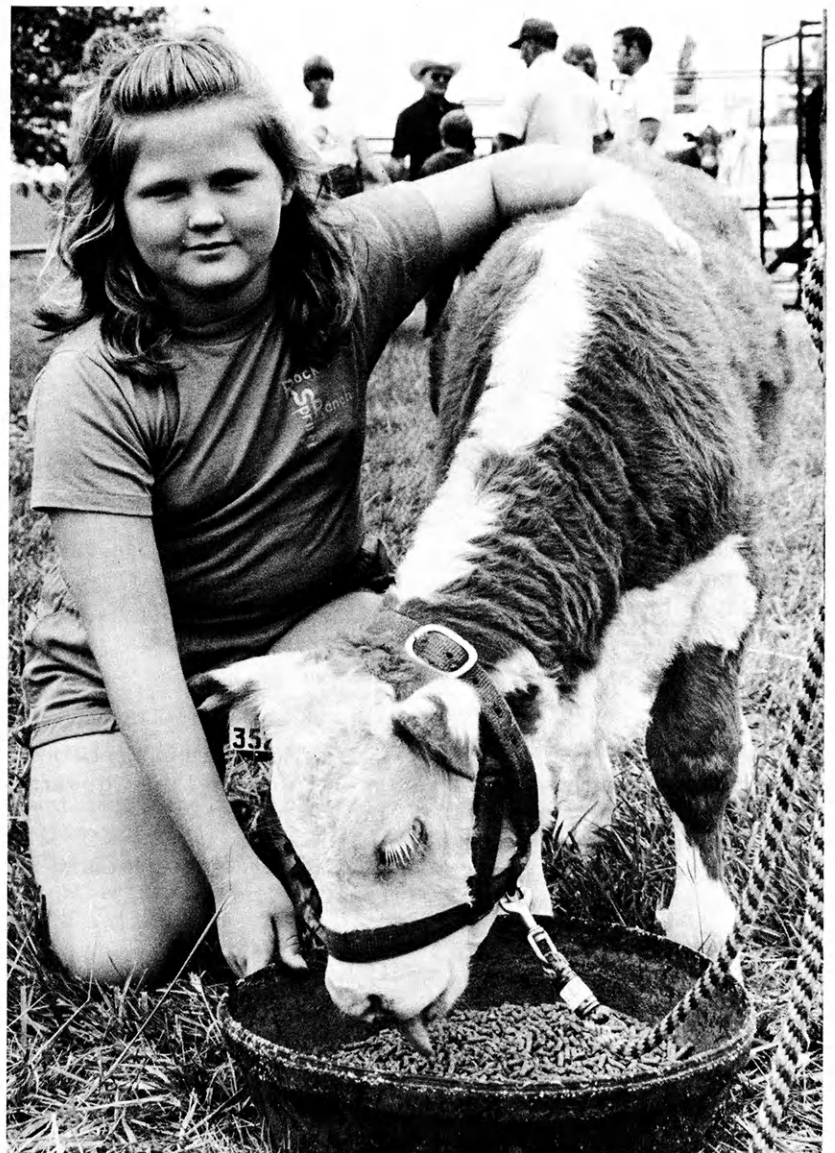
Market Beef Steer

Unit 1: Introductory 4-H Steer Feeding

Own, feed, and manage one or more steer calves of acceptable quality for a minimum of 140 days.

Weigh and identify steer at the beginning of project.

Secure bulletin, 4-H 344, *Introductory 4-H Steer Feeding* and carry out the learning experiences in chapters 1 through 8.



4-H'ers 12 years of age and under can take a bucket calf as a project. In the bucket calf project, the 4-H'er learns to care for a newborn calf.

136

Breeding Beef

Unit 1: Introductory Beef Breeding

Own, feed, and manage one or more heifers or cows for breeding purposes.

Secure bulletin, 4-H 345, *Introductory Beef Breeding* and carry out the learning experiences in chapters 1 through 7.

137

Commercial Cattle Feeding

Own three or more grade, crossbred, or purebred calves of any beef breed.

Follow either a deferred feeding program or some variation of it, a feedlot program or stocker-feeder program.

138

Bucket Calf

Youths 7 to 12 learn to love and care

for a newborn, developing basic knowledge of proper feeding, housing, managing and showing.

Bicycle Safety and Care

140

Unit 1: Your Bicycle and You

Members will learn parts of the bicycle, how to make the bike fit them, and basic care and maintenance.

141

Unit 2: Maintaining Your Bicycle

Members will learn how to adjust parts such as brake, chain, bearing cones, tire care, and how to plan a hazard hunt.

142

Unit 3: Enlarging Your Cycling World

Members will learn how to paint and

customize their bike. They will also learn about advanced maintenance and how to plan bike trips for a group.

Citizenship

Citizenship is acting with informed concern for self and others.

Life skills form the foundation upon which rests the relationships an individual has, beginning with self, extending to other groups; family peers, community, state, nation and world. The relationships take place in the economic, political, social and physical environments.

4-H'ers may choose from 9 different units in 6 phases of citizenship. It is suggested that individuals enroll in one unit per year and progress as far as they wish in order of units.

Counties must purchase member books in many of these phases.

Phase One — Self & Family (ages 7-10)

143 Unit 1: Me, My Family & Friends

Self-identity, self-acceptance and relations with family and friends are studied. It means, "Good citizenship is knowing who I am and being able to relate to others."

144 Unit 2: My Neighborhood

Move beyond the family and close friends into the neighborhood and school. It means, "Good citizenship is knowing and sharing with neighbors."

Phase Two — Community Involvement (ages 11-14)

145 Unit 3: My Clubs & Groups

Learn to function in organized groups to be more effective participants. It means, "Good citizenship is participating in group decision making."

146 Unit 4: My Community

Learn to understand and how to be involved in your community. This is a multi-year unit and may be continued as long as a 4-H'er wishes.

Phase Three — Governmental Process/ County, State, National (ages 14 and up)

147 Unit 6: My Government

A member may wish to spend one year on each level of government. Included in this unit are discussions on governmental systems, laws and voting.



The community club is a place where 4-H'ers meet new friends, learn to work as a group, give project talks and learn parliamentary procedure. By serving as club officers and on committees, 4-H'ers learn leadership.

This includes the importance of citizen involvement in the governmental processes.

Phase Four — International Focus (ages 12 and up)

148 Unit 5: My Heritage

Learn about family heritage through developing a family tree. Also, study heritage from other selected areas of interest.

149 Unit 7: My World

Members interested in International study and experiences will want to consider this unit. Activities include Inter and Intra Exchanges such as IFYE, Labo, state and county exchanges, etc.

Phase Five — Others (In depth Study)

150 Unit 8: Others

If a 4-H member desires to study further a specific area, study other material available under Building Family Strengths, Exploring 4-H, or Fun with Children. Use the available records for each of the above.

Phase Six — Youth PRIDE

151 Unit 9: Youth PRIDE

Members may enroll as a group, promoting projects to help improve their community, and work with the Kansas

PRIDE program which is coordinated through the local extension office.

Community service and betterment projects would be typical activities for this program.

Clothing

Each year 4-H members will be learning about fabrics, construction techniques, equipment, grooming, care of clothing, and buymanship.

156 Adventures in Clothing

Learn to choose sewing tools. Use and care of sewing machine. Care of clothing.

Make articles that use straight seams, square corners and backstitching. Ideas for articles to make:

Needle book. Pin cushion. Oven mitt. Tote bag. Book bag. Simple dress. Blouse. Swimsuit coverup. Pop-over shirt. Construct an article, a garment, or a two-piece coordinated outfit.

157 Clothing Speaks

Learn about line, design and color, pattern sizes, selecting a pattern, different kinds of fabrics, sewing with a pattern, new sewing skills, modeling, and hair care.

Construct a garment or a two-piece coordinated outfit.

158 Clothing Classics

Learn about building a wardrobe, choosing accessories, design and color, improving sewing skills, textiles, sewing

different kinds of fabrics, types of interfacing, care of clothing, and good grooming.

Construct a garment or a two- or three-piece coordinated outfit.

159

Special Clothes

Make two garments for special occasions, using a new type of fabric you have never sewn on before.

160

Complete Costume

Learn about fashion, fabrics, tailoring or advanced sewing techniques and career opportunities.

Construct one or more coordinated outfits.

161

Clothing Carousel

Emphasizes how to plan, select and buy clothes. Teenage girls will purchase one complete outfit.

162

Clothes Strategy

Emphasizes how to plan, select and buy clothes. Boys will purchase one complete outfit.

165

Commodity Marketing

Develop a better understanding of the principles and practices involved in the marketing of *any* product. This might include potatoes as a garden project, wool in the sheep or clothing project, timber in forestry or wood science or the typical livestock and grain projects.

166

Computer

Learn how to operate a computer, apply existing software to your interests or needs, program in BASIC language, and apply your computer knowledge to other 4-H projects.

170

Crochet

Each year make one large or two small articles.

Begin by learning to do chain, single crochet, double crochet, and slip stitch stitches. Also learn to increase and decrease stitches. Each year improve skills already learned and try new stitches.

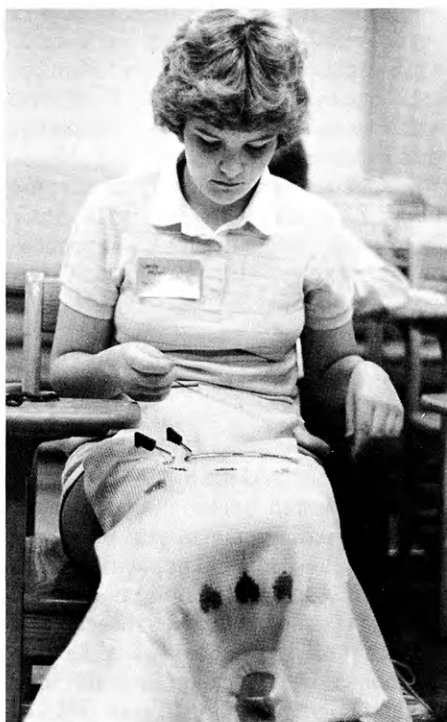
Dairy

175

Calf or Heifer

Own one or more high grade or purebred dairy calves or heifers.

AUGUST 1986



Kids can learn how to sew in 4-H.

Feed and manage the calf or heifer for breeding purposes.

To exhibit at state shows, registration or transfer papers must be in the 4-H's name and dated not later than July 1.

176

Cow Production

Own one or more dairy cows.

Feed and manage the cow through the gestation, calving, and production period.

Feed and manage the calves produced.

To exhibit at state shows, members must have registration or transfer papers in their name by July 1.

Keep production records on each current lactation. Dairy production records start October 1 and end September 30 of each year.

177

Dairy Beef

Own one or more steer calves of dairy breeding.

Project may start with a baby calf or feeder steer and terminate with a feeder or slaughter steer.

The steer must be fed and managed for a minimum of 140 days.

Consider including the Veterinary Science Program, page 14, if you enroll in the Dairy Project.

178

Dairy Goats

Own one or more purebred or high grade does.

Feed and manage the doe for breeding

purposes.

Breed doe to registered buck.

Feed and manage the kids produced.

Dog Care and Training

Care for and train one or more dogs. Dogs may belong to member or to member's family, may be male or female, spayed, registered or unregistered, and may be of any breed or combination of breeds.

Keep records on cost of care and feeding of dog. You may enroll in any one or combination of the three phases at the same time.

180

Unit 1: Dog Showmanship

Learn how to groom and handle your dog for the show ring.

181

Unit 2: Dog Obedience

Learn how to train your dog for obedience.

182

Unit 3: Breeding and Management

Raise dogs for sale.

Consider including the Veterinary Science Program, page 14, if you enroll in the dog project.

Ecology

185

Understanding the World Around Us

Members will explore the relationship with the living and nonliving beings in the environment. They will read about the secrets which keep the earth alive and well. They have the opportunity to go into the field and study wildlife, insects and the thousands of living things around them. The emphasis is on studying the relationships which living things share. We hope it will help them fit into this gigantic and complicated mechanism so that they can live in harmony with the magnificent system of life.

Electricity

190

Unit 1: Exploring the World of Electricity

Unit designed to develop an understanding of the basic principles and theories of electricity — definition, basic terms, types of circuits, resistance and resistive heat, electric light and electric safety activities.

191

Unit 2: Electricity's Silent Partner — Magnetism

Unit deals with the relationship between electricity and magnetism and the way they work together to provide us many of the conveniences for our modern living.

9A

192

Unit 3: Working with Electricity

This unit includes wires and cords, electric connections, basic equipment, home wiring, planning home wiring, grounding, maintaining home electrical equipment.

193

Unit 4: Electricity for Family Living

Topics include electricity in the home, lighting and lamps, heating appliances, operation of motors, refrigerators and air conditioners, electronic appliances and maintenance concepts.

194

Unit 5: Behind the Switch

A basic knowledge of electricity through the study of previous units in the 4-H electric program is necessary. The project deals with how electricity is produced, explains the generation, transmission and distribution of electrical energy and explores the fuels used to power generators.

195

Unit 6: Introduction to The World of Electronics

A basic knowledge of electricity



Learning to wire outlets, lamps and buildings is a part of the electric project.

through the study of prior units in the 4-H electric energy program is necessary. Topics include Electronic and Waves; Basic Electronic Devices — Resistors; Basic Electronic Devices — Capacitors; Basic Electronic Devices — Coils; Resonant Circuits and Filters; Electronic Tubes; Electronic Circuits; Solid State Electronics; Electronics for Communication; Electronics for Business Components and Computers — The Thinking Machine.

Entomology

200

Introductory Phase

This is suggested for the 7- to 9-year-old or interested beginner of any age. 4-H'er should remain in this phase no more than two years. They will learn to catch, pin, label and identify at least six orders of insects. At least 15 insects, and no more than 30 can be displayed in two cigar boxes. Date/locality labels required on each specimen. This phase will **not** have a state fair class.

201

Beginning Phase

Suggested for 4-H'ers who have completed in the Introductory Phase, or for members at least 10-years-old who have had some basic training in entomology in school.

Members are expected to advance to the next phase at their own speed and on the advice of their leader.

Suggested guidelines for advancement are three years in one phase, or exceptional progress at the local level, or state fair purple or blue ribbon exhibit.

Display a minimum of 50 and not more than 150 specimens in one standard box with glass cover. Specimens should represent at least 8 different orders and a date/locality label is required for each specimen. A special educational exhibit may be made as an option to the collection exhibit.

202

Intermediate Phase

For members who have advanced from the Beginning Phase by satisfying their leader with progress at the local level, or a state fair purple or blue ribbon exhibit, or a maximum of three years in the previous phase.

Display a minimum of 100 and not more than 300 specimens. Two standard boxes can be used. Specimens must represent and identify at least 10 different orders. Only specimens of six common orders need be identified to family. Date/locality labels required. A special educational exhibit may be made as an option to the collection exhibit.

203

Advanced Phase

For older members who have advanced from the Intermediate Phase by satisfying their leader with progress at the local level of a state fair purple or blue ribbon exhibit, or a maximum of three years in the previous phase.

Display a minimum of 150 and not more than 450 specimens in not more than three standard boxes. Specimens must represent and identify at least 12 different orders. Specimens of six common orders need be identified to family. All butterflies labeled with correct common name. Date/locality labels required. A special educational exhibit may be made as an option to the collection exhibit.

204

Bee Science

4-H'ers should be 10 years and older. They will establish one or more colonies of honey bees and manage them for one season. They may exhibit extracted (liquid) honey produced by these colonies or choose to exhibit a special educational exhibit. Initial cost for establishing one honey bee colony may be \$100-150.

205

Exploring

This project strives "to search through or into for discovery." Exploring is an experience of discovery for the young 4-H'er or new 4-H members. This is a project designed to be done in small groups in which 4-H'ers sample a variety of activities offered in 4-H such as cooking, safety, craftsmanship, woodworking, drama, animals, nature, recreation as well as the variety of talents and interests within themselves. The possibilities for exploration are limited only by those limits set by the group itself.

Exploring deals with questions like how am I alike and different from my friends? what's a 4-H club? what can I contribute to my family? Learning occurs by involvement with family and project group members as 4-H'ers explore themselves and the world around them.

Some sample project meetings have been: hillbilly band day, hazard hunt day, make a giant pizza day, create a creature day, junk food day, animal day, nature day, have a party day. Your project leader can help you explore other possibilities.

Materials are designed to be best used by 4-H'ers who are 9 years old and older.

206

Family Strengths

Explore family heritage with your family and do other fun activities together as a family.

Foods and Nutrition

208

Neat-to-Eat Snacks

For beginning cooks. Develop food preparation skills, and learn about nutrition and food safety as they make and eat nutritious snacks from the four food groups.

209

Snacks and Mini-Meals

For the not-quite-beginning-stage cooks who want to learn recipes which are a bit more difficult and make use of the stove. This phase continues training in good cooking habits and eating proper foods.

210

All American Foods

Explore America in a unique way — discovering the people, history, and traditions of our country through the foods we like to eat.

Examples of nutritious meals included are Pecos Bill Burgers, Star Spangled Salads, Yankee Snickerdoodles, Squanto's Beans, Dixie Breakfast.

211

Fitting It All Together

Introduces members to information on nutrition, fitness and a healthy lifestyle. Will prepare pizza, milk drinks, nachos, sandwiches, fruit snacks, stir-fry vegetables and chili-con-carne. (Counties must purchase member books)

212

Fitting It All Together II

Continues to emphasize nutrition, fitness and a healthy lifestyle. Includes information on snacks, fast foods, soups and salads, food myths and planning lunches. Counties must purchase member books.

213

Foods with an International Flavor

Learn to entertain friends with snacks, meals and parties through serving chili, pizza, lasagna.

Plan and serve a luau.

Learn to make mealtime special.

214

Yeast Breads

Understand the principles and techniques involved in making yeast breads and rolls.

215

Advanced Foods

Explore your food interests. Spend 30-50 hours involved in a special food interest area such as microwave cooking, entertaining, decorating foods, dried foods, gifts from the kitchen and weight control, etc.

220

Food Preservation

Enroll in food preservation and select one or more of the 4 units which are suggested in the member material:

Unit 1

Canning and freezing fruits, canning tomatoes, and making home sweet spreads (except jelly).

Unit 2

Canning and freezing low acid foods and making pickles and relishes.

Unit 3

Making jelly, freezing main dishes, baked products, desserts, etc., and preserving more of other foods.

Unit 4

Drying fruits, vegetables, herbs, and meats.

Forestry

227

Junior 4-H Forester

This project emphasizes tree identification through tree leaf or leaf, twig and fruit collections. The member will learn to use a tree key and various references to assist in identification, and obtain a basic understanding of how a tree grows. Leaf or leaf, twig and fruit collections may be exhibited at the county fair.

A 4-H'er should enroll in this phase a minimum of two years before enrolling in the Senior 4-H Forester phase.

228

Senior 4-H Forester

This project can involve any one or a combination of the following: forest, Christmas tree, windbreak or fuelwood planting, or improving an existing woodlot through pruning, thinning, etc. The project will develop an understanding of the interrelationships between forest, soil, water, wildlife and man.

Members will begin with a plan and then actually carry out the prescribed activities with the resource. A resource area must be available to work with. It may belong to the 4-H'er, his parents, or any consenting landowner.

A three-ring loose-leaf binder project book will contain written and pictorial documentation of activities and accomplishments.

An area extension forester will provide consultation and direction to each member.

233

Fun with Children

This project gives the 9- to 12-year-old

member a chance to help a pre-school "fun friend" in his development in many areas such as Stories and Make Believe, Art and Music, Toys and Play, and Nature and Animal Activities.

Geology

Members may enroll in only one of Units 1, 2, or 3 in any given year. However, they may take Unit 4 in combination with any other unit during the same year. Progress from the beginning to the advanced phases upon satisfying the project leader. If they enroll in Unit 1, 2 or 3, secure a copy of the Geology manual, *Exploring the World Through Geology*. If they enroll in Unit 4, ask for the manual, *Cutting and Polishing Gemstones and Minerals*.

235

Unit 1: Beginning Geology (Collecting Rocks, Minerals, and Fossils)

Learn how to properly take a field trip for the purpose of collecting rocks, minerals, and fossils.

Learn how to clean, identify, label, and display the specimens you collect.

Make a collection of the rocks, minerals, and fossils collected. Use project book (4-H 303) as a guide to the number of specimens to have in the collection depending upon the number of years enrolled in the beginning project.

236

Unit 2: Intermediate Geology (Classifying Rocks, Minerals, and Fossils)

Continue to add to the rock, mineral, and fossil collection.

Learn how to properly classify rocks, minerals, and fossils.

Make at least three of the tests for identifying rocks and minerals mentioned in the geology manual (hardness test for minerals, acid tests for calcium carbonates, streak tests for minerals, luster test, etc.)

Make at least two field trips each year to areas different than those visited in previous years.

Each year, select and carry out a special project (see project book, 4-H 304, for suggestions).

Collections should have at least 45 rocks, minerals, and fossils.

Exhibits of Indian artifacts or lapidary work (polishing stones) may be used as special project under this unit.

237

Unit 3: Advanced Geology (Use of Geological Information in Everyday Living)

Select and complete one of the special

projects described in the 4-H Geological Information in Everyday Living." Use the project book, 4-H 302.

238

Unit 4: Lapidary (Cutting and Polishing Gemstones and Minerals)

Learn about the sources and uses of rocks and minerals which will be polished.

Collect rocks and minerals from Kansas and other states that can be cut and polished.

Exhibit results of the lapidary project and record findings on the lapidary record sheet.

After completing the first lesson, "Gemstone and Mineral Collection," 4-H'ers may select one or more of the remaining eight lessons each year. Each lesson has a basic phase and a certain number of optional exercises which are required to complete the lesson. These lessons are described in the member's manual, *Cutting and Polishing Gemstones and Minerals*.

Younger 4-H members may select the beginning lessons, but should be at least 12-years-old before enrolling in lessons which require skilled power equipment (lessons 3-9).

243

Health

Develop desirable health habits and attitudes toward personal health — physical, mental, and emotional. Focus on health areas such as smoking, drug abuse, alcohol, and personal fitness.

245

Home Environment

Acquire a knowledge of principles and materials necessary to make the home more attractive, convenient and comfortable within the family's resources.

Make things for your own room, such as rugs, wastepaper baskets, bulletin boards, etc.

Make a list of things that would improve the rooms in the home.

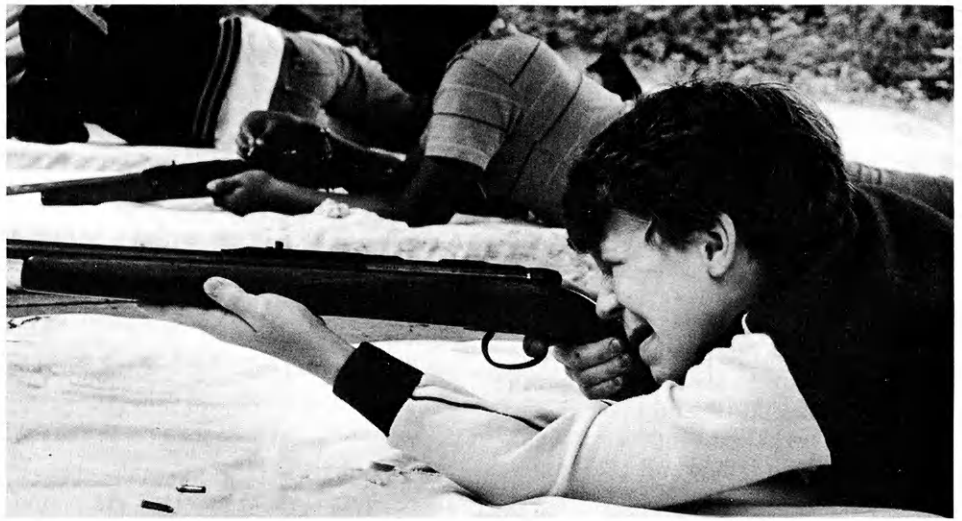
Decide what you and your family will do each year. We encourage the 4-H'ers to work with other family members in making their home improvements. Just keep a record of what member does and what other family members do.

250

Horse

Manage at least one light horse of any breed or age.

Keep records on horse or horses from



4-H'ers should enroll in the shooting sports project only if the county has a trained team of leaders to teach the project. Leader training is held annually. Plans are to have shooting sports training at Rock Springs Ranch 4-H Center in 1987.

the start of the 4-H year, or as soon as the horse is purchased. Member must manage the horse at least 75% of the time from May 1 through September 30.

Properly identify your horse project on the "4-H Horse Identification Certificate."

Certificate must be in county Extension office by May 1.

Each project horse must be owned and/or managed according to the following:

You may own the horse yourself or immediate family, or your legal guardian.

No more than two members of a family may carry the same horse as a project.

253

Horseless Horse

Designed for 4-H'ers who would like to learn about horses, but who are not able to own a horse. They may want to visit a farm or stable to learn about horses, or study project material that is available.

Suggested experiences include presenting a talk or demonstration about something they learned about horses, or participating as a horse judging or horse bowl team member. They may also want to assist with 4-H horse events in their county.

They must enroll in the regular horse project and meet the requirements to be eligible to show a horse at the District or State 4-H Horse Shows.

Consider including the *Veterinary Science Program*, page 14, if you enroll in the *Horse project*.

Horticulture

The 4-H Horticulture project has six phases. Each phase is independent of the others. Members may work in one or more phases or in just one phase for any number of years.

255

Flowers and Houseplants

Grow annual and/or perennial flowers in the yard or garden. Grow and care for houseplants.

256

Landscape and Turf

Care for the existing lawn, renovate or establish a new lawn.

Make a plan for the yard or grounds.

Plant the trees or shrubs called for in the plan. One or more years to complete this part of the plan may be needed.

257

Food from a Minigarden

If members lack space for a regular garden, they may grow plants for food in window boxes, baskets, tubs, or other containers.

258

Food from a Family Garden

Grow vegetables and/or small fruits for family use. Size of the garden varies with member's age.

259

Food from a Market Garden

Grow vegetables and/or small fruits for sale. Members may grow only one crop such as tomatoes or potatoes.

260

Science in Horticulture

This unit provides 4-H'ers of any age with the opportunity to perform simple experiments with plants.

265

Knitting

Each year the 4-H'er will make one large or two small articles. Begin by learning how to cast on, do knit-and-purl stitches, how to increase and decrease.

Each year try new stitches and/or patterns.

Leadership

273

Focus on Leadership

4-H'ers will learn about the different styles of leadership they can use to help other 4-H'ers learn. The leadership record is a valuable tool to help teen leaders (same as junior leaders) as they plan and put into action the things they want to do in leadership.

280

Meats

New learning experiences expand on foods, beef, swine, and sheep project experiences.

Many individual's interest areas may be explored. Some of the more common include:

Identify retail cuts with methods of cookery.

Evaluate carcasses and cuts for quality and yield differences.

Study food value contribution of meat to human diet.

Select and prepare meat for family meal.

Study meat marketing chain from livestock producer to processor to retailer to consumer. Learn about career opportunities.

Participate in meat identification and judging contests.

Pets

285

Aquarium Pets

Keep and observe one or more aquarium pets such as fish (tropical or gold), frog (tadpole) or toad, lizard or salamander, or snake.

Read one book or pamphlet about their kind of pet.

Give a talk or demonstration about their pet.

Complete the record sheet and write a story about the project.

286

Enjoy Your Cat

Take care of and learn about at least one cat during the year.

Start with a kitten or mature cat.

Learn the health needs of cats.

Observe and understand the physical make-up of cats.

Teach the cat the rules of the house.

Fill in appropriate pages in the project booklet.

Give a presentation showing something they have learned.

287

Hand Pets

Keep and care for one or more hand

pets (at least four months.)

Read one book or pamphlet about their kind of pet.

Complete the record sheet and write a story about their pet project.

A hand pet may be a rabbit, guinea pig, hamster, or gerbil.

Photography

290

Adventures With Your Camera

4-H'ers may use a pocket, instant, semi-adjustable, or fully-adjustable camera. The pictures will be snapshot size and may be of any subject the 4-H'er wishes. While taking pictures 4-H'ers will learn to:

Load and unload film.

Hold and aim the camera.

Take care of film and negatives.

Take horizontal and vertical pictures.

Clean the camera.

Discover how the film works.

291

Exploring Photography

4-H'ers may use a pocket, instant, semi-adjustable, or fully-automatic camera. The pictures they take and use may be snapshot size or enlargements. 4-H'er should learn to:

Take shots from different angles.

Use the "rule of thirds".

Frame a subject or scene.

Use perspective and leading lines.

Why different films have different speeds and how to use them effectively.

Mount photographs for display.

Take pictures that tell a story.

Record an event, activity, or trip.

Use simple flash.

Make trick shots.

292

Mastering Photography

4-H'ers may branch and experiment in different areas of photography. Some youngsters may want to concentrate in one or two areas of study. 4-H'ers may learn to:

Use filters, different kinds of lenses and meters.

Take portraits, studio and nature shots.

Double mount or use other special display techniques.

Make title slides.

Make a four-to-seven minute slide tape.

Handle a motor drive effectively.

Take pictures to illustrate a book, project records, club history or family memories.

Judge photos.

293

Darkroom Techniques

4-H'ers concentrate on darkroom

techniques and developing film and prints. They may learn to:

Develop film and make proof sheets.

Process and mount slides.

Make a simple enlargement.

Crop, dodge, burn in or edgeburn.

Select a filter or paper grade that is just right.

Tone photographic paper.

Create special effects — printing with double negatives, screening, etc.

Make photographic plates for printing.

Poultry

298

Market Poultry

Broilers, roasters, capons or turkeys. Start with any number of chicks or poults of either sex for broilers, roasters, and turkeys or cockerels for capons. Follow recommended practices to grow birds to market age in the most economical manner. Keep accurate records.

299

Laying

Grow and/or manage pullets or hens for laying during the project year. Keep accurate records.

300

Exhibition

Start with any number of one species of exhibition poultry (chickens, turkeys, ducks, geese) and feed and manage. Keep appropriate records.

301

Pigeons

Own and care for a minimum of one pair of birds with at least one brood during the first year.

305

Public Speaking

Strive to bring the purpose and value of 4-H work to the attention of the general public in greater measures. You may do so in one or more of these ways.

Talks.

Demonstrations.

Exhibits.

Radio and TV.

Organizing new clubs.

Obtaining new members.

Colored slides and photographs.

Panels and discussions.

Plays, skits, and ceremonies.

306

Rabbits

The intent of the rabbit project is to help youth better understand how to properly breed and raise rabbits and develop initiative and responsibility in their work. 4-H'ers will learn how to feed, house, manage, breed and show rabbits.

Reading

307

Reading for Enjoyment

Read a minimum of five books, two of which are non-fiction.

Share the book you enjoy best with someone — parents, family, leader or 4-H'er.

Do one or more of the suggested activities and as much of "Know Your Library" as possible. (See *4-H Reading Project*, 4-H 191).

Optional:

Prepare an exhibit, either as an individual or club.

Prepare a poster or book display of library aids, such as card catalog, references, or "Readers' Guide."

308

Reading for Project Enrichment

Read project material.

Read for information about projects from other sources.

Read at least one book for pleasure that is related to a project.

Do one or more of the suggested "Activities" and as much as "Know Your Library" as possible. (See *4-H Reading Project*, 4-H 191).

Optional:

Make an educational exhibit as an individual or club.

311

Recreation

Plan and conduct recreational activities for family, club, and others. Members may do this alone or with help from others. They may work in one or more of these areas or in other areas of recreation.

Singing and music.

Folk and square dancing.

Sports.

Arts and crafts.

Hobbies.

Parties and picnics.

Social recreation.

Family fun.

Plays.

Stunts.

Outdoor cookery.

313

Rocketry

Develop an awareness of the basic concepts of space science and aeronautics.

Obtain an interest and awareness of the impact of the aerospace program on society.

Explore areas of interest in the aerospace program.

Explore aerospace careers.

Participate in experiences in aerospace science that will enhance the individual's responsible growth toward productive citizenship.

Learn to design, construct and fly rockets.

Give talks and demonstrations on rocketry.

Keep a record on rockets built, flown and displayed.

Learn and practice rocketry safety.

315

Safety

Study and practice safety living habits and develop greater safety awareness within family and community.

Member may work as an individual or as a club.

Work in one or more of these areas:

Farm.

Traffic.

Home.

Fire.

Animals.

Recreation.

Chemicals.

Related to other projects.

Survey of Safety.

"Survey of Safety" is a two-level program which provides opportunity for participation and recognition of 4-H'ers of different age levels in the "Safety Starter" and "Safety Senior" programs. (See *Survey of Safety*, 4-H 129, for details).

330

Self Determined

Create a project by developing the *what, why, when, where, who* and *how* into an action plan designed by and for the member.

A self determined project may be:

A new or different project.

An expansion of a traditional project.

A self determined project is a process of problem solving.

Request bulletin 4-H 394, *Select, Plan and Evaluate*, from your Extension agent.

Examples of the self determined project titles are:

Agriculture and Related Areas

Comparison of Hay Making Methods.

Small Animal Behavior.

Taxidermy.

Welding.

Skiing.

Weather Forecasting.

Range Management.

Home Economics

Cake Decorating.

Completing Your Family Tree.

Early Childhood and Learning.

Consumer Laws.

Changing Food Patterns.

Changing Lifestyles.



Over 1,100 4-H club members are enrolled in the rabbit project.

Value Comparisons Between Generations.

Fashion Design.

Mobile Home Living.

Other

Radio and TV Advertising.

Leisure in Today's Society.

Working with Handicapped Children.

Cross Cultural Exchanges.

Automotive.

Arrowheads.

Sheep

333

Market Lamb

Own one or more purebred, crossbred, or grade lambs at least 90 days before any recognized show.

Identify all animals with an approved tag. Feed and manage the lamb during the fattening period.

Weigh market lambs when the project starts and at fair time to figure average daily gain, feed costs, and financial return.

334

Registered Breeding Sheep

Own one or more registered purebred ewe lambs, yearling ewes or older ewes.

Feed and manage ewes for breeding.

Keep appropriate production records including ram service fees.

Lambs produced may be fed for market or breeding.

Identify animals properly and register with breed association.

335

Commercial Breeding Sheep

Own one or more serviceable ewes.

The ewes may be purebred, grade, range or native.

Breed ewes to a sire-breed ram. (Ram may be part of the project.)

Feed and manage ewes through the gestation, lambing, and nursing period. (Lambs produced may be fed out or sold as feeder lambs).

Consider including the Veterinary Science Program, page 14, if you enroll in the Sheep Project.

336

Shooting Sports

Learn a safe and effective way to shoot a pellet gun; .22 rifle, and shotgun. Enroll in this project ONLY if your county has a 4-H trained team of leaders.

Small Engines

340

Unit 1: Operation and Maintenance

Learn the parts of a gasoline engine and their functions.

Perform service on one or more small engines.

Keep a record of the service performed on the engine.

Practice safe operation of implements, tools, and use of fuels.

Develop a system for checking a non-running or a poorly operating engine for causes of trouble.

Become competent in correcting engine troubles.

341

Unit 2: Power and Design

Continue the service jobs on small engines used around the home or farm. Keep a record of services performed on the engine. Practice safe operation of implements, tools and use of fuels.

Develop a system for checking a non-running or poorly operating engine for causes of trouble. Become competent in correcting engine troubles.

342

Unit 3: Lawn and Garden Power Equipment

This phase is mainly about the rotary lawn mower, the rotary tiller, and how power is transmitted.

Learn and practice safety rules for a mower and/or tiller.

Learn how to operate this equipment correctly.

Learn how power is transmitted from the engine to the working unit.

Learn to do minor maintenance jobs on the mower and/or tiller.

Swine

345

Market Pig

Own one or more purebred, crossbred,

or grade feeder pigs.

Feed and manage the pig during the fattening period.

Pig must be owned for at least 90 days to be eligible to be exhibited.

Weigh and identify your pigs at the start of the project.

346

Breeding Gilt

Own one or more purebred or crossbred gilts.

Manage and feed the gilts for breeding purposes.

Gilt must be owned for at least 90 days to be eligible to be exhibited.

Only registered gilts born after February 1 of the current year can be shown at state shows.

347

Sow and Litter

Own one or more purebred, grade, or crossbred sows.

Breed Association programs should be followed as to care and management of project.

Keep records on fall farrowed litters as well as spring farrowed litters.

Pigs raised from these litters may be exhibited in market barrow or gilt classes if members are enrolled in those projects and complete the appropriate records.

Consider including the Veterinary Science Program, page 14, if you enroll in the Swine Project.

Tractor

Be responsible for the correct care and maintenance of one or more farm tractors.

Fill out the worksheets on each tractor.

If members do not drive a tractor or are just learning to drive, enroll in the first year. Choose second, third, or fourth year according to the amount of experience they have had in driving a tractor.

350

First Year — Get Acquainted With Your Tractor

Learning How to Be Safe

What Makes an Engine Run

Nuts, Bolts, Screws, and Rivets

The Instrument Panel

Controls for Your Tractor

Daily Maintenance and Safety Check

Starting and Stopping Your Tractor

Clean Air for Your Engine

Periodic Lubrication and Maintenance

351

Second Year — Assuming Safe Efficient Operation

Tractor Safety on the Farm

Oil for the Engine

Mixing Fuel and Air

Battery Service and Spark Plugs

Cooling Systems for Engines

Care of Tires

General Lubrication

Tractor Records and Operating Costs

352

Third Year — Improving Your Skills

Tractor Safety on the Highway

Engine Ignition Systems

Hitches, PTO, and Hydraulic Controls

Steering, Brakes, and Front Wheels

Valves and Valve Service

Power Transmissions

Winter Care and Trouble Shooting

Tractor Records and Ownership Costs

353

Advanced Years — Machinery Care and Safety

This unit is planned so members may work in machinery care for three or four years.

Safe Use of Farm Machinery

Transmitting Power

Tools for Breaking the Soil

Applicators for Chemicals

Servicing Seed Planters

Cutters for Crops

Seed Separation

Farm Machinery Management

The unit, "Tools for Breaking the Soil," may be a year's work if there are several machines in this unit on the farm. If not, combine one or two machines from this unit with machines from other units to make a year's work in the project.

The unit, "Farm Machinery Management," should be part of the third or fourth year's work in machinery care.

354

Hazardous Occupations

This makes it possible for 14- and 15-year-olds to work on a farm driving a tractor for someone other than a parent. Federal regulations require 14- and 15-year-olds to have this training to permit them to drive a tractor for someone other than a parent.

Veterinary Science

To help youth better understand animals, their health and disease problems, and how this relates to man, three units of study are offered:

360

Unit 1: The Normal Animal

Attitude and Behavior

The Skin Membranes and Intestinal Discharges

Body Temperature, Pulse, and Respiration Rate

Maintaining Animal Health

Cleaning and Disinfection

The Cells of the Animal Body

The Organs and Systems of the Animal Body

361

Unit 2: Animal Disease

- Introduction to Disease
- Bacteria and Disease
- Viruses and Disease
- External Parasites
- Nutrition and Disease
- Poisons and Disease
- Stress and Disease
- Hereditry and Disease

362

Unit 3: Immunology, Zoonoses and Public Health

- Introduction to Immunology
- Mechanisms of Invasions by Pathogens
- Development of Immunity — Natural, Acquired, Active, and Passive
- Immunization of Animals — Biologic Agents and Their Administration
- Allergin Theory
- Zoonoses and Public Health

The completion of one unit of study could be considered a project, or the unit of study may be used to enrich any livestock, horse, poultry, rabbit, dog or dairy project.

Wildlife

365

The Birds Around You

“Birds Around You” was designed to help members learn to identify and manage the bird life we share. Emphasis of the project is on identification of birds, identification and improvement of habitat for birds and studying birds’ nesting and feeding habits. The project includes field trips, study hikes, and construction of bird houses and feeders.

366

Reptiles and Amphibians

Most young people have strong feelings about snakes, frogs, toads, and turtles. This project offers help in finding, identifying and studying these important creatures.

The project emphasizes learning to treat reptiles and amphibians in a positive and mature way.

367

Acres for Wildlife

Members practice management of land and the living things on it. Major steps of the project are: to contact a landowner or operator, seek his cooperation, locate an acre or more of wildlife cover which he is willing to set aside, ask him to enroll this land and manage this land for wildlife production. Members have the opportunity to help the landowner/operator with wildlife management practices, record these practices, and record the wildlife usage of the area.

368

Fur Harvest

The 4-H'er can identify and study the

natural history of fur bearers, learn how to set the most humane and efficient traps, make efficient sets, catch and harvest fur bearers, skin and prepare the furs for market, and tips on marketing or preserving furs. In agriculture, traps are often necessary to control wildlife damage to sheep, cattle and other livestock and poultry. This project offers training to help solve wildlife-caused problems. In the autumn of most years, two-to-three-day area fur harvest camps are conducted. These provide material related to this project.

369

Kansas Mammals

Learn about mammals and how to classify them into seven major groups. Key characteristics of each group showing tracks and suggested activities to learn about mammals are included. Additional suggestions about handling wild mammals, materials and equipment and assembling notes and data are included in the member’s manual.

370

Endangered Species

This project is divided into two parts. One is devoted to a study of and a search for a black-footed ferret, the rarest and most endangered mammal in North America that might be still living in western Kansas from Highway 81 west. The other division of this project involves all endangered wildlife and a study of the total subject.

371

Let’s Go Fishing

Like most activities, fishing requires a certain degree of knowledge and skill for success. This project helps beginning anglers learn the basic elements of how, when, where and with what to fish.

Goals include a study of life processes (food habits, predation, habitat requirements, etc.) Records are not required. In the late spring or summer some area 4-H fishing clinics are held.

Woodworking

375

Unit 1: Working with Wood and Tools

Those who are learning to use hand tools should enroll in this unit. 4-H’ers may carry Unit 1 for one or more years. Use hand tools only.

Learn about tools needed for this unit, measuring and marking, making a square cut, cutting curves, nailing, and finishes for the articles you make.

The following are suggestions of things to make: napkin holder, sanding block, book ends and broom holder.

376

Unit 2: The Wonderful World of Woods

Because members will be learning to use power tools, for safety purposes they should be at least 10-years-old.

Learn how to identify, measure, and buy wood; use an electric drill, sander, saber saw, and jig saw to make wood-working items from suggested plans in the member’s guide.

377

Unit 3: Building Bigger Things

Those who enroll in this unit should have some experience in woodworking. They may make articles or do repair or maintenance jobs or a combination of both.

Learn about kinds of wood, particle and fiberboard, how to use and sharpen wood chisels, how to use planes and clamps and about joints in wood.

Among things that can be made are a sawhorse, book rack, household furniture and a gun rack. Suggestions for repair or maintenance jobs include replacing a windowpane, painting a porch floor, rehanging a door, refinishing a piece of furniture, painting a building, reroofing a building and repairing a squeaky floor.

378

Unit 4: Craftsman

Those who enroll in this unit should have considerable experience in wood-working. They may make articles or do repair or maintenance jobs or a combination of both.

Learn to care for and sharpen tools; about a grinder, electric hand saw, saber saw, circular saw, jointer, band saw, drill press, gluing, painting and finishing wood. Learning to use power tools is emphasized in this unit.

Items 4-H’ers may want to make are a work bench, study desk, picnic table and benches and household furniture.

See suggestions for repair maintenance given in Unit 3.



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