



# KANSAS 4-H PROJECT SELECTION GUIDE



**K-STATE**  
Research and Extension

This guide gives a brief description of each of the official state 4-H projects. Support for each project can vary depending on your local program and the volunteers available to help. Exploring your interests through 4-H project work is an excellent way to discover new skills and potential careers. Curriculum and other resource materials can be ordered through your county or district extension office or online. Have a great time with your 4-H projects.

## Beef

The beef project is a great way to learn about raising, caring for, and managing beef cattle. Begin with a bucket calf and build your own herd as you learn about the beef industry. In time, through this project you'll learn about different breeds of beef cattle; parts of the animal; how to feed, groom, and show your animal; how to judge beef cattle for market and/or breeding; how to produce high quality beef; and how to use data and technology in an efficient beef cattle operation.

### Beef Bucket Calf

This project is open to 7- to 12-year-old youth. Calves may be purchased or orphaned but are to be bottle/bucket fed.

### Market Beef

Select, raise, and show a market steer or heifer.

### Breeding Beef

Select, raise, and show a breeding heifer. Learn the value of performance data to make breeding decisions.

### Learning by Doing:

Exhibit at local beef shows, State 4-H Livestock Sweepstakes at K-State (includes: Livestock Judging Contest, Quiz Bowl, Skillathon, and Meats Judging Contest), State Beef Show at the Kansas State Fair, and the Kansas Jr. Livestock Show.

## Citizenship

In the Citizenship project you'll learn about yourself, family, and friends and how to take an active role in your community, country, and world. This project will encourage you to meet people and learn to work with groups. You can learn about local, state, and national government. You can also make new friends from other countries and cultures through exchanges.

### Learning by Doing:

Volunteer in your community; attend Citizenship in Action in Topeka; attend Citizenship Washington Focus in Washington, D.C.; participate in exchange trips or host youth from another country.

## Clothing and Textiles

The Clothing and Textiles projects will introduce you to the world of clothing, fashion, and accessories. Learn to create and sew your own items in Clothing Construction or develop your sense of style and value through Buymanship. These projects can build your confidence in managing your wardrobe or launch a career in fashion.

### Clothing Construction

The clothing construction project will teach you

the basics such as sewing a shirt or putting a zipper in a pair of pants. Learn to select appropriate fabrics, use patterns, sew quality seams, and care for your garments. In advanced units, you can learn how to take the design of your choice and customize it for the perfect look, color, and fit.

### Buymanship

Buymanship will give you that edge on knowing your wardrobe; planning a budget for an outfit; learning to select colors and styles that complement your body shape, proportion, and balance; choosing between different shades of colors; making decisions about clothing purchases by comparing fiber, care requirements, cost, brand, and style; and analyzing clothing advertisements.

### Learning by Doing:

Make fair exhibits; make items for community service; participate in Fashion Revue to model clothing construction or buymanship items.

## Communications

4-H is famous for helping kids improve their communication skills. Being a better speaker, writer, or record keeper will help you throughout your life. The communications project will help you learn to interpret verbal and nonverbal information, develop effective public speaking skills, enhance written and spoken communication, defend a point, design a presentation, and much more.

### Learning by Doing:

Tell people in your club about your other 4-H projects in an illustrated talk or demonstration; write a thank-you note; run for an office in your club; complete a record book; present a speech.

## Dairy Cattle

In the Dairy project you'll learn about raising and managing dairy animals. 4-H members usually start with a heifer calf or yearling heifer, learning how to select, groom, and show. Along the way, you'll learn about breeds of dairy cattle, parts of a cow, judging and presenting oral reasons, animal health and welfare, and safe practices for handling milk and milk products. Older 4-H members with mature cows learn about animal feeds and nutrition, milk production, and careers in the dairy industry. Specific projects include: Dairy Bucket Calf, Dairy Heifer, and Dairy Cow.

### Learning by Doing:

Participate in Kansas All Breeds Junior Dairy Show, Judging Contest, Skillathon, and Dairy Quiz Bowl.

## Dairy Goats

The Dairy Goat project is a great animal project for smaller properties. Goats are easy to train and handle. Milk can be consumed by the family, fed to bucket calves, or fed to other market animals. You might start with one doe, raise kids, and eventually create your own dairy goat herd. Throughout the project, you can learn about breeds of dairy goats, parts of a goat, proper care and welfare of animals, record keeping, and more.

### Learning by Doing:

Participate in county and state dairy goat shows; join a regional dairy goat organization.



## Dog Care and Training

Whether you have a dog or hope to get one, this project will help you learn more about dogs, from basic care and grooming to advanced training commands. Learn about different dog breeds and choose the best breeds for your family. Explore dog behavior, body language, and obedience training. Learn about proper nutrition to keep your dog happy and healthy.

### Learning by Doing:

Show your dog at county shows and the State 4-H Dog Show at the Kansas State Fair. Members without dogs may participate in quiz bowls and other activities that do not require dog ownership, such as the State 4-H Dog Conference.

## Energy Management

Energy Management includes the Electric/Electronics, Small Engines, and Power of the Wind projects. These projects will help you understand how to power the world today and think about how to meet future energy needs.

### Electric/Electronics

Learn important general electrical concepts as you experiment with making light switches and circuits, test voltages and even build motors. Study energy use, magnetism, electronics and transistors.

As you get older you can determine your family's electrical usage; measure electric usage of appliances; test grounded outlets; explore electronics; build simple radios, microphones, computers and other equipment; and explore careers in electronics and engineering.

### **Small Engines**

Learn how small engines work as well as how to service them and keep them running safely. Start by learning the parts and cycles of engines; explore the importance of clean air to an efficiently running engine. Older 4-H members will learn to trouble-shoot, repair, and rebuild an engine; understand rules and regulations for small engines; and explore starting a small engines business or career.

### **Power of the Wind**

Discover the power of the wind. Learn how wind can be used for sailing, lifting, pumping water, and creating electricity. You'll get to design and build a wind powered boat; design and build wind turbines; discover where and why the wind blows; and discover the wind in art and literature.



## **Entomology**

Have you chased butterflies or caught a ladybug to get a closer look? Do you think collecting bugs is fun? Then the Entomology project is right for you. You'll learn the body parts of an insect. Make an insect net. Collect, pin, label, and exhibit an insect collection. Later on, you'll study how insects move and learn about insecticides. In advanced project work, you'll learn about insect behavior.

### **Learning by Doing:**

Plant a butterfly garden. Catch and observe a spider in its web. Conduct an insect survey. Start an insect collection for exhibit at the fair.

## **Environmental Science**

4-H has a growing environmental science curriculum to help you learn about your environment; explore ecosystems; understand conservation; learn how water can be responsibly preserved, protected, used, and reused; expand recycling efforts; and understand your ecological footprint.

### **Learning by Doing:**

Organize a park, highway, or waterway clean-up; research an environmental topic of your choice and make a video or do a project talk explaining what you learned; find indepen-

dent, credible research for and against climate change to decide what you believe and explain why.

## **Exploring 4-H**

This project is for first- and second-year members. It's a great way to explore 4-H projects without enrolling in all of them. Members will be exposed to numerous project areas with the guidance of older members and adult volunteers.

## **Family Studies**

Learn about growing and maintaining a healthy family. In Family Studies projects, you'll learn about child development, building family strengths, and managing a household.

### **Child Development**

Learn how children grow and develop physically, socially, mentally, and emotionally. Observe how people express emotions. Identify characteristics of friends. Learn socially accepted manners and customs. Observe child behavior.

### **Family**

Learn behaviors that develop friendships; respect others and their belongings; understand the need for family rules; express feelings in a positive way; learn to cope with change; know that family forms change; learn physical changes of adolescence; use the "Think-Feel-Do" cycle of stress; learn that choices have consequences; study effects of employment on family and lifestyle; and learn to use consensus and compromise.

### **Consumer Skills**

Responsible financial management is an important factor in successful families. Learn to determine differences between needs and wants; develop a savings plan for a specific goal; practice comparison shopping; learn to make change; understand peer pressure; learn to manage a checking account; recognize target advertising; identify consumer rights; and learn the value of employment.

### **Learning by Doing:**

Partner with a peer to explore and discover solutions to today's consumer topics. Create an intergenerational community service project. Establish a baby-sitting service.

## **Fiber Arts**

Have you ever wondered how someone crocheted a scarf or embroidered the pillowcases? Have you looked at a quilt and wondered how it was made? The Fiber Arts project will help you learn how to make these things. Fiber Arts focuses on skills passed down through generations to provide basic family needs, such as apparel, home furnishings, and decorations.

### **Crochet**

Learn single crochet, double crochet, and many other stitches; advance to hairpin lace.

### **Knitting**

Learn casting on, knit, and purl stitches.

### **Needle Arts**

Learn embroidery, cross-stitch, needle point, candlewicking, crewel, lacework, and applique techniques.

### **Patchwork and Quilting**

Learn to stitch, tie, and design quilts.

### **Rug Making**

Create latch hook and braided rugs.

### **Spinning**

Make a hand spindle. Prepare wool fibers.

### **Weaving**

Learn parts of a loom. Figure yarn needs for items.

### **Ethnic Arts**

Learn textile art methods from different cultures that have been passed on throughout history.

### **Macramé**

Create ornamental knotting. Learn terms, tools, techniques, and cords.

### **Learning by Doing:**

Create items for fair exhibits. Teach others the skills you've learned. Donate items you've created to hospitals, shelters, or nursing homes.

## **Foods and Nutrition**

In this project, you will have fun learning how to cook the basics and then advance to gourmet and international meals. Develop your baking skills. Learn about food preservation. You can also learn the heritage of many foods and consumer buying skills to get the most for your money. Learn how to make healthy snacks and modify recipes to fit a healthy lifestyle.

### **Learning by Doing:**

Enter a foods exhibit in the fair. Plan and prepare snacks and meals for your family. Incorporate exercise into daily life. Learn about food safety.

## **Geology**

Have you ever found an interesting rock and wondered what kind it was? Do you get excited about finding fossils? Then dig into the Geology project. Discover the types of minerals, rocks, and fossils in your area and other geological formations across Kansas and in other states.

### **Learning by Doing:**

Geology field trips to various Kansas locations.

## **Health and Wellness**

Health, exercise and recreation are vital parts of your daily lives. In these projects you can focus on physical activity, healthy eating, exercise, sports and recreation, or first aid.

### **Bicycle**

Learn and practice bicycle safety; identify parts of a bicycle; learn bicycle maintenance and repair; and practice safe riding at night and in adverse conditions.

### **Health**

Health is one of the four "H"s. Learn basic first aid and create your own first aid kit; learn to choose nutrient-rich "power foods" for snacks; learn how to improve personal strength, flexibility, and endurance; and design your personal fitness plan.

### **Outdoor Adventures**

Go enjoy the great outdoors. Learn about hiking, camping, and backpacking; learn about finding shelter. Observe and care for nature. Find your way using a compass, GPS, or landmarks. Apply the "Leave No Trace" ethic when backpacking and hiking.

### **Recreation**

Learn about different types of recreation; iden-

tify personal areas of strength; and learn the benefits of recreation for your body and mind.

## Home Environment

Interior design is all about making a house into a home. This project will help you with this goal by experimenting with colors, textures, light, sound, and space to create the perfect feeling. The Home Environment project will help you explore an interior design career.

### **Learning by Doing:**

Plan a room make-over; visit a design center, and interview an interior designer.



## Horse

Love horses? Want to learn to safely handle, care for, and ride your horse? Members may own or lease their horse, but must manage the horse 75 percent of the time, whether owned or leased.

Horseless horse members do not own or lease a horse. Learn about the basic coat colors, breeds, and anatomy of horses; study horse health; and participate in judging contests, quiz bowl, hippology, and give presentations. Horseless horse project members may volunteer to assist with horse shows and trail rides.

### **Learning by Doing:**

Visit a stable or farm; participate in the State Horse Judging Contest, State Horse Quiz Bowl, Horse Panorama, horse presentations and hippology, and district and state horse shows.

## Leadership

Are you ready to step up to leadership? Learn the skills it takes to be a leader such as: understanding yourself, considering others' feelings, being responsible, communicating, making decisions, and managing and working with groups.

### **Learning by Doing:**

Join a Gavel Games team to learn to run a meeting. Volunteer for a committee. Chair a committee. Run for an office. Attend Campference or the Kansas Youth Leadership Forum.

## Meat Goats

The 4-H Meat Goat project is quickly growing with the increasing demand for meat products. Learn how to select, raise, and care for a meat goat; learn the parts of a meat goat; study breeds; learn how to fit and show meat goats; recognize diseases; learn how to keep records; select breeding stock; learn key components in developing a goat herd; and evaluate feed ingredients.

### **Learning by Doing:**

Participate in Youth Meat Goat Day at K-State,

Livestock Sweepstakes, and the State Meat Goat Show at the Kansas State Fair.

## Performing Arts

Do you enjoy being in the spotlight? Do you like to be creative while performing on-stage or setting up backstage? Then you should jump into this project. You will learn to express yourself in front of a crowd.

### **Learning by Doing:**

Express yourself by creating and presenting a theatrical play or musical performance; create a puppet show; create costumes, sets and props; and enter your local Club Days or other contests.

## Pets

Whether you're a fish, hamster or cat lover, these projects can help you learn more about your household friends. You'll learn about different pet species and how to keep them healthy.

### **Pets**

Identify hazards for pets around your home, and learn about your pet's feeding and care. Learn the symptoms and treatment of diseases. Learn about taxonomic classification.

### **Cats**

Learn factors to use when choosing a cat. Practice cat grooming techniques. Study cat senses. Begin to understand cat behavior. Study cat diseases affecting people and learn about cat genetics.

### **Learning by Doing:**

Design a toy for your pet. Create a commercial or even a pet store scavenger hunt.

## Photography

Capture your friends, family and important events through photography.

**Level 1** — Learn how a camera works. Learn basic photo composition. Organize a photo story. Learn to use a simple camera.

**Level 2** — Learn shutter speeds and f-stops. Use the Rule of Thirds. Learn to capture a point in time.

**Level 3** — Use filters. Learn to use a light meter. Create still-life photos. See the differences between normal, wide angle, telephoto, and zoom lenses.

### **Learning by Doing:**

Enter a photo contest or fair exhibit. Enter the photography judging contest at the Kansas State Fair.

## Plant Science

Plant Science projects focus on raising a garden, growing flowers, forestry, and field crops. This includes planning, planting, experimenting, understanding soils, seeds, insects, plant care, harvesting, weed identification and control, processing, exploring careers, and the relationship between trees, people, and communities.

### **Field Crops**

Experiment with soil testing; grow and harvest crops; plant a wheat variety test plot; and learn about herbicides and fertilizers.

### **Forestry**

Learn to identify trees; determine differences between trees and shrubs; learn about differ-

ent trees and tree parts; graft a bud to a living tree; learn the sounds and smells of the forest; discover health benefits of trees; investigate forest changes and learn about forest health; study forests on a global scale; and learn forest conservation techniques.

### **Horticulture**

Learn when, where, and what to plant; learn the differences between cool and warm-season vegetables; learn plant parts and how they are used; learn the care and use of basic garden tools; learn about seed varieties and starting seeds indoors; learn preventative pest control; learn about specialty harvests and selling your produce; study plant pollination; study food industry careers; and learn about biotechnology.

### **Learning by Doing:**

Participate in the Kansas 4-H State Wheat Show; Crops Identification Contest at the Kansas State Fair; Horticulture Judging Contest; and Regional Land Judging Contests.

## Poultry

This project is designed to help you learn about chickens and other poultry. You will learn poultry breeds and body parts, and learn how to care for and handle your birds. Learn how eggs are formed; learn how to select and judge broilers; make an egg candler; learn about pecking orders; lead younger members in egg experiments; learn how to process chickens for food; and learn about biotechnology and poultry careers.

### **Learning by Doing:**

Participate in the Poultry Judging Contest at the Kansas State Fair.

## Rabbits

The rabbit project will help you learn how to raise and care for your rabbits. Identify main breeds of rabbits; identify the parts of a rabbit; learn good feeding and watering practices; learn to groom and show a rabbit; and learn to care for newborn rabbits (kits). It is best to enroll in the fall to prepare for receiving your first rabbit.

### **Learning by Doing:**

Join a 4-H Rabbit judging team; start with a doe and grow your project by selling rabbits.

## Reading

Do you enjoy a good book? This project encourages you to harness your love of reading to learn more about your 4-H projects, research new topics, or entertain yourself. As Dr. Seuss wrote, "The more that you read, the more things you will know. The more that you learn, the more places you'll go."

### **Learning by Doing:**

Get a library card and use your public library; study a specific topic; read for pleasure; share a book review with others; and read with younger kids at an elementary school or after-school program.

## Self Determined

The self-determined project is just that — you decide what you do or study. Is there something you have a passion for that is not included in the 4-H project listing? This is your opportunity

to create your own project. Research a sport, hobby, or career — the sky is the limit.

**Learning by Doing:**

Identify and pursue a personal passion or interest; set goals and evaluate the completion of your goals; and share your hobby, interest, or activity with others.

## Sheep

The sheep project can be a great way to learn about the sheep industry. 4-H members can enroll in either market or breeding projects. Through your years in the sheep projects you will: learn the parts of a sheep; identify breeds of sheep and their uses; manage and train sheep for show; learn safety procedures and management practices for maintaining a flock; identify symptoms, causes, and treatment of common diseases; study nutritional requirements for various ages of sheep; learn reproduction and genetics of sheep; study technology's impact on sheep production; and explore career opportunities in the sheep industry.

**Market Lamb**

Select, raise, and show a market lamb; member must obtain ownership of the animal; market ewes should not be returned to a breeding flock.

**Breeding Sheep**

Select, raise, and show a breeding ewe; purchase a flock of breeding ewes.

**Learning by Doing:**

Participate in the Livestock Sweepstakes (includes Livestock Judging Contest, Quiz Bowl, Skillathon, and Meats Judging Contest); State Sheep Show at the Kansas State Fair; Youth Sheep Day at K-State.

## Shooting Sports

Want to learn to shoot an air rifle, shotgun, or bow and arrow? Check out the 4-H shooting sports project. This project teaches gun safety, care and safety of shooting sports equipment, hunting practices, and provides an opportunity to test your skills.

Check with your county or district extension office about a certified program in your county. Local certified shooting sports coordinators and instructors are required for each discipline. Disciplines include BB Gun, Air Rifle, Air Pistol, Archery, Shotgun, Hunting Skills, Muzzle Loading, Small Bore Rifle, Small Bore Pistol, and Western Heritage.

**Learning by Doing:**

Demonstrate safe use of air rifle, shotgun, bow, etc. through practice, talks, demonstrations, and exhibits. Exhibit shooting sports skills at local and district events. State matches for the different disciplines are held in the fall and spring. Participate in the Instructors Junior Apprentice Training Program (ages 14 and older).

## SpaceTech

Build model rockets, robots, and explore space. Navigate your world with GPS and make better decisions using GIS. Learn about computers and how to repair them and network devices. SpaceTech projects offer you the thrill of exploring the field of science and technology.

**Rocketry/Aerospace**

Discover how a model rocket works; study equipment and procedures for a safe launch; learn the Model Rocket Safety Code; build and launch your own model rockets.

**Astronomy**

Study the history of telescopes; learn about the kinds and uses of telescopes; build a simple telescope; learn planet order by making a key ring bead system; view solar videos; build spectrometers; distort light with lenses and prisms; and learn display tips and how to set up public viewings.

**Robotics**

Learn about robot arms, legs, wheels, or underwater propulsion. Explore sensors, analog, and digital systems. Build basic circuits. Design a robot. Program a robot to do a task.

**Geospatial**

Learn to use Global Positioning Systems (GPS) to identify locations and measure distances. Make maps of local neighborhoods or entire states using Geographic Information Systems (GIS). Use maps to solve traffic problems, pinpoint pollution sources, and reduce disease.

**Computers**

Learn the basic components of a computer; identify the similarities and differences in office software applications; learn Internet safety. As you get older, learn to build, maintain, and repair computers. Learn programming languages and network security.

**Learning by Doing:**

Teach your new SpaceTech skills to others. Organize a GeoCaching activity for your 4-H club. Launch a rocket.

## Swine

Want to learn about raising, caring for, and managing a market or breeding hog? Enroll in the swine project where you can study pork production from farrow to finish. Through your time in the project you'll learn the body parts of a hog; identify different swine breeds; learn types of feeds; identify symptoms, causes, and treatments of swine diseases; study breeding systems and performance data; and explore career opportunities in the swine industry.

**Market Swine**

Select, raise, and show a market hog.

**Breeding Swine**

Select, raise, and show a breeding gilt. As you grow in the project, you might manage your own

breeding herd and sell market hogs to others.

**Learning by Doing:**

Participate in Youth Swine Day at K-State; Livestock Sweepstakes (includes Livestock Judging Contest, Quiz Bowl, Skillathon and Meats Judging Contest); and the State Swine Show at the Kansas State Fair.

## Visual Arts

Encourage your creative skills in learning how to draw, paint, and work with different media. Explore art techniques, study art history and culture, or challenge yourself to discover new artistic talents. The visual arts project teaches artistic skills and the elements and principles of design.

Projects included within Visual Arts include Ceramics, Leather, and other areas, depending on your local 4-H program.

**Learning by Doing:**

Practice drawing, painting and printing techniques in paint, pencil, chalk, charcoal or mixed media; learn sculpture techniques; make something from wood, leather, paper, or clay; weave a basket or wall hanging; etch glass or metal; make jewelry and wire sculptures; create mosaics or nature crafts; discover new media. Enter your best work in the fair. Teach others the new skills you've learned.

## Wildlife

Kansas wildlife is an important part of the state's heritage and environment, ranging from buffalo to birds and fish to deer. In this project you'll learn about wildlife behavior, habitat requirements, how wildlife species fit into nature's scheme, how they are managed, and how they relate to humans. Some counties also offer Sport Fishing as an additional project.

**Learning by Doing:**

Enter a sport fishing contest. Create wildlife habitat. Participate in the Hunting, Fishing & Fur Harvesting School. Enter the Wildlife Habitat Evaluation Contest.

## Woodworking

Whether you want to build a bookshelf or a whole house, the skills, tools, fasteners, and joints you'll need are very similar. In the Woodworking project you'll learn how to accurately measure and mark boards, how to use various tools, safety practices, how to identify types of lumber, and select wood based on grain. As you get older, you'll learn to use power tools, discover technology in tools, and explore career opportunities.

**Learning by Doing:**

Select and build an item to exhibit at the fair. Use your new skills to volunteer or help a neighbor. Teach others something you learn in the woodworking project.

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