



4-H

PROJECT SELECTION GUIDE



K-STATE
Research and Extension



Exploring your interests through 4-H project work is an excellent way to discover new skills and potential careers. While projects can vary depending on your local program and availability, this guide offers a starting point for each of the official state 4-H projects. Resources for each project can be ordered through your county or district extension office.

Enjoy your 4-H project experience!

Beef

Learn about raising, caring for and managing beef cattle as you start with a bucket calf and work toward building your own herd. You'll learn about different breeds and anatomy of beef cattle; 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-olds. 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, (includes livestock judging, quiz bowl, Skillathon, and meats judging), Kansas State Fair State Beef Show, and the Kansas Junior Livestock Show.

Citizenship

Take an active role in your community, country and world while learning about yourself and those around you. This project will encourage you to meet people and work with groups while learning about local, state and national governments. You also can make new friends from other countries and cultures through exchange programs.

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

Learn to create and sew your own clothing and accessories while exploring the world of fashion in Clothing Construction. Or, develop your sense of style and value through Buymanship. These projects build your confidence in managing your wardrobe or may launch a career in fashion.

Clothing Construction

The clothing construction project will teach you the basics, such as sewing a shirt or putting in a zipper. 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 help you understand your wardrobe; plan a clothing budget; select colors and styles that complement your body shape, proportion and balance; choose different shades of colors; compare fiber, care requirements, cost, brand and style; and analyze 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 youth improve their communication skills. Being a better speaker, writer or record keeper will help you throughout your life. The communications project will help you interpret verbal and nonverbal information, develop effective public speaking skills, enhance written and spoken communication, defend a point, design a presentation, and more.

Learning by Doing

Discuss your other 4-H projects in an illustrated talk or demonstration to club members, write a thank-you note, run for a club office, complete a record book, or present a speech.

Dairy Cattle

Learn about raising and managing dairy animals by selecting, grooming and showing a heifer calf or yearling heifer. Along the way, you'll learn about dairy cattle breeds and anatomy, judging and presenting oral reasons, animal health and welfare, and safe practices for handling milk and milk products. 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 great for smaller properties since goats are typically easy to train and handle. Goat 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 and anatomy of dairy goats, proper care and welfare of animals, record keeping and more.

Learning by Doing

Participate in local and state dairy goat shows or join a regional dairy goat organization.

Dog Care and Training

Whether you have a dog or hope to own one, this project will help you learn more about your family's best friend, 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 while learning about proper nutrition to keep your dog happy and healthy.

Learning by Doing

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

Energy Management

Through the Electric/Electronics, Small Engines and Power of the Wind projects, you will begin to grasp how we power the world today, as well as think about how to meet future energy needs.

Electric/Electronics

Learn 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. Later, 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 safely. You'll start by learning the parts and cycles of engines and exploring the importance of clean air to an efficiently running engine. Later, you will learn to troubleshoot, repair and rebuild an engine; understand rules and regulations for small engines; and explore starting a small engine business or career.

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 and wind turbines; discover where and why the wind blows; and explore the wind in art and literature.

Entomology

If you've ever chased butterflies, caught a ladybug for a closer look or started a bug collection, the entomology project may be a great fit. You'll learn the anatomy of an insect; make an insect net; and collect, pin, label and exhibit an insect collection. Later, you'll study how insects move, learn about insecticides and explore insect behavior.

Learning by Doing

Plant a butterfly garden, catch and observe a spider in its web, conduct an insect survey and start an insect collection for exhibit at the fair.

Environmental Science

Our growing environmental science curriculum helps you not only learn about your environment, but also 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 cleanup; research an environmental topic of your choice and make a video or do a project talk; locate credible research on climate change to decide what you believe and why.

Exploring 4-H

This project is for first- and second-year members. It's a great way to explore 4-H projects without officially committing. 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 by learning 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, and observe child behavior.

Family

Learn behaviors that develop friendships, develop respect for others and their belongings, understand the need for rules; express feelings in a positive way, cope with change and stress, learn physical changes of adolescence, study the 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 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, and establish a baby-sitting service.

Fiber Arts

If you've ever wondered how to crochet a scarf, embroider a pillowcase or make a quilt, this project can help you learn these skills and more. 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, needlepoint, candle wicking, 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 or prepare wool fibers.

Weaving

Learn parts of a loom or 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 or to donate 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 baking skills, learn about food preservation, explore the heritage of many foods and understand consumer buying skills. 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, and learn about food safety through activities like working in a club concession stand.

Geology

If you enjoy learning about interesting rocks or fossils, then dig into this 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 and collect, identify and display specimens.

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

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 Recreation

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

Adventures

Learn about different types of recreation identify 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 experiment with colors, textures, light, sound and space to create the perfect feeling. You also can explore a career in interior design.

Learning by Doing

Plan a room makeover, visit a design center and interview an interior designer.

Horses

If you love horses and want to learn how to safely handle, care and ride a horse that you own or lease at least 75 percent of the time the horse project is for you. In this project you will learn basic coat colors, breeds and horse anatomy; study horse health; participate in judging contests, quiz bowl and hippology; and give presentations. If you want to exhibit a horse in the District Show or State Fair, Achievement Level I is required to participate. Achievement Level I focuses on safe handling of horses. Then once completed Achievement Level I, Achievement Levels II, III, and IV can be taken to advance your educational knowledge of horses. 4-H Horse Identifications are due May 1 into the local Extension Office.

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 exhibit at district and state horse shows.

Horseless Horse

If you love horses and do not own or lease a horse then the Horseless Horse project is for you. In this project, you can learn about horses, participate in judging contests, quiz bowl, hippology, give presentations, and can assist another 4-H member at horse shows and trail rides. In the Horseless Horse project a borrowed 4-H Identified horse can be shown locally in showmanship, only.

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 attend district and state horse shows.

Leadership

Learn what it takes to be a leader through skills including 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 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 as demand increases for meat products. You'll learn how to select, raise and care for a meat goat; study breeds and anatomy; learn how to fit and show meat goats; recognize diseases; keep records; select breeding stock; learn key components in developing a goat herd; and evaluate feed ingredients.

Learning by Doing

Participate in Meat Goat Day at K-State, Livestock Sweepstakes, Kansas Junior Livestock Show and the State Meat Goat Show at the Kansas State Fair.

Performing Arts

Those who enjoy being in the spotlight on stage or being creative off stage may enjoy this project. Learn to express yourself in front of a crowd.

Learning by Doing

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

Pets

Whether you love fish, hamster or cats or other pets, these projects can help you learn more about your household friends and what different pet species need to stay 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 as well as taxonomic classification.

Cats

Learn how to choose 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 a pet store scavenger hunt.

Photography

Capture your friends, family and important events through photography.

Level 1

Learn how a camera works, basic photo composition, organize a photo story and how to use a simple camera.

Level 2

Learn shutter speeds and f-stops, the Rule of Thirds, and how to capture a point in time.

Level 3

Use filters and a light meter and create still-life photos. See the differences between normal, wide angle, telephoto and zoom lenses.

Learning by Doing

Document your family or club activities through photos; 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.

Horticulture

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

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 different trees and tree parts, graft a bud to a living tree, discover health benefits of trees, investigate forest changes and learn about forest health and learn forest conservation techniques.

Learning by Doing

Participate in the Kansas 4-H State Wheat Expo; Crops Identification Contest at the Kansas State Fair; and Horticulture Judging Contest.

Poultry

This project is designed to help you learn about chickens and other poultry. You will learn poultry breeds and anatomy and how to care for and handle your birds. Learn how eggs are formed, how to select and judge broilers, make an egg candler, pecking orders; lead younger members in egg experiments; 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 allow you to learn to raise and care for your rabbits. Identify main breeds of rabbits and their anatomy, learn feeding and watering practices, learn to groom and show a rabbit, and care for newborn rabbits. 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

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 for your local public library, 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 listed? 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

In this project, 4-H members can enroll in either market or breeding. Throughout your 4-H years, you will learn to identify sheep breeds and anatomy, manage and train sheep for show, learn safety and management practices for maintaining a flock, identify symptoms and treatment of diseases, study nutritional requirements, 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 or purchase a flock of breeding ewes.

Learning by Doing

Exhibit at a local sheep show the Livestock Sweepstakes, or Kansas Junior Livestock Show.

Shooting Sports

If you want to learn to shoot an air rifle, shotgun or bow and arrow, you should 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. To participate, youth must be 8 years of age as of January 1 of the current year.

Check with your county or district extension office about a certified program. 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, or participate in the Instructors Junior Apprentice Training Program (ages 14 and

older).

Space Tech

Build model rockets, robots and explore space with telescopes. Discover the world of unmanned aerial systems, to safely and legally fly a drone. Learn about computers and how to repair 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, build and launch your own model rockets.

Astronomy

Study the different kinds and uses of telescopes, build a simple telescope, learn planet order by making a key ring bead system, build spectroscopes, distort light with lenses and prisms, and how to set up public viewings.

Robotics

Learn about robot arms, legs, wheels or under-water propulsion; explore sensors, analog and digital systems; build basic circuits; design a robot; and program a robot to do a task.

Unmanned Aerial Systems

Explore the world from above the trees and discover new frontiers with Unmanned Aerial Systems (UAS). This project provides the opportunity to safely expand your understanding of UAS and the world around them. You can explore the uses and applications of UAS, including how they link to other projects such as geology, robotics, electronics, crop science and more.

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 re-pair computers. Learn programming languages and network security.

Learning by Doing

Teach your new SpaceTech skills to others; launch a rocket; build a robot and enter it at the county and state fair.

Swine

If you want to learn about raising, caring for and managing a market or breeding hog, enroll in the swine project where you will study pork production from farrow to finish. Throughout the project you will identify different swine breeds and anatomy; 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

Exhibit at a local swine show or participate in K-State's Youth Swine Day; Kansas Junior Livestock Show; or the Kansas State Fair Swine Show.

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 include ceramics, leather and more, 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 and 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 local units also offer sport fishing as an additional project.

Learning by Doing

Enter a sport fishing contest; create wildlife habitat; participate in the Hunting, Fishing and Fur Harvesting School; and enter the Wildlife Habitat Evaluation Contest.

Woodworking

Whether you want to build a bookshelf or a whole house, you'll need similar skills, tools, fasteners and joints. In this project you'll learn how to accurately measure and mark boards, use various tools, safety practices, 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; and teach others something you learn in the woodworking project.

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