

University of California 4-H Youth Development Program - Projects

Revised: 11/21/2023

“Learn by doing” in an atmosphere where learning is fun is a basic philosophy of 4-H. The project is where learn-by-doing takes place. Within the project, members find things to learn, to do, to make, and to explore.

A 4-H project is:

- Planned work in an area of interest to the 4-H member.
- Guided by 4-H adult volunteers who are project leaders.
- Aimed at planned objectives that can be attained and measured.
- Summarized by some form of record keeping.
- A minimum of six hours of project instruction.

Each year, a 4-H member enrolls in at least one project. Members enrolling for the first time should be encouraged to take on only one project. As members gain experience, the size of the project may be increased, or additional projects may be selected. Some project groups meet once a week. Others meet once or twice a month. The purpose of these meetings is to guide the members in gaining knowledge, attitudes, skills, and habits needed to complete their work successfully. Check with your county office to see which projects are currently being offered in your county. The availability of a project depends upon whether an adult volunteer is available to lead it.

Note: Many of these project names act as umbrellas for specific topics. For example, a 4-H Club may offer an "Arts and Crafts" project that focuses on glass etching, porcelain dolls, or another topic. Please check with your 4-H Club Leader for a specific list of projects your 4-H Club offers.

Positive Youth Development

4-H is designed to support the positive and successful development of all youth. 4-H volunteer leaders are essential partners in creating a positive environment by focusing on the strengths of youth and providing positive ways for youth to meet their basic needs. <http://4h.ucanr.edu/About/Mission/>

Youth-Adult Partnerships

Youth-adult partnerships are shown to be one of the most effective ways to engage both youth and adults in meaningful activities which contribute to positive youth development. <http://4h.ucanr.edu/About/Framework/YAP/>

4-H Record Book

Most projects encourage 4-H members to record their learning experiences with the Annual Project Report, <http://ucanr.edu/sites/uc4-h/resources/members/recordbook/>

For Adult 4-H Volunteer Leaders

Project Leaders Resource: https://4h.ucanr.edu/Resources/Volunteers/Project_Leader_Resources/

Safety

Safety is an important consideration in all 4-H projects. Please review the Clover Safety Fact Sheets. https://safety.ucanr.edu/4-H_Resources/

4-H Curriculum

Curriculum is available at: ANR Publications (<https://4h.ucanr.edu/Resources/Curriculum/>) and National 4-H Mall (<https://shop4-h.org/pages/curriculum>).

4-H Age

This is the age by December 31 of the program year.



Civic Engagement

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Leadership and Personal Development	Ambassador Leadership (4-H age: 14 & older)	A project in which a member is selected as an ambassador. Learn how an ambassador assists their county and members. Resource: https://4h.ucanr.edu/Projects/Leadership/County_Ambassadors/	Primary	
	Beginning 4-H	A project for new 4-H members which provides the opportunity to "sample" different projects.		
	Beginning 4-H (4-H age: 5 to 8)	For members under the age of nine to participate in; project may include basic sampling of other projects.		
	Career Exploration	Learn about career opportunities through individual or group study under the direction of a leader.		Agribusiness, Juntos, entrepreneurship, Pathways to Your Future (grades 9 to 12)
	Fair Preparation	Learn what to expect and how to prepare for participation at the fair. May include how to fill out fair entries and prepare a still exhibit, what supplies to bring to fair, how to prepare for fair camping, your local fair culture, or any other topic that will help to make a member's fair experience successful.		
	Group-Determined	Any project which a group has determined it wishes to do.		
	Leadership Development	Learn about leadership for an individual, group and organization. Build your own leadership skills through public speaking, project management, communication, organization, and negotiation.		Club officer, iGrow, iThrive, Cloverbud
	Record Keeping	Learn about records management and the practice of identifying, classifying, archiving, preserving, and destroying records. Many projects may focus on 4-H record books. https://4h.ucanr.edu/Resources/Member_Resources/RecordBook/		Record books
	Self-Determined	Any project which a member wishes to engage in for which there is not already a project category.		
	Teens as Teachers (TAT)	Using a cross-age teaching model, this project utilizes older 4-H youth as teen teachers in facilitating nutrition education lessons teaching younger youth basic nutrition and cooking skills through hands-on cooking lessons. Resource: https://4h.ucanr.edu/Resources/Teens-as-Teachers/		Cooking Academy, Youth Experiencing Science (YES!), Mindful Me



Civic Engagement (continued)

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Civic Engagement	Civic Engagement	Learn to make a positive difference in one’s community and developing the combination of knowledge, skills, values, and motivation. Youth will learn to engage within communities on many scales--from local to global--making contributions that reinforce their sense of purpose and strengthening their sense of belonging with peers and community adults. More information on California 4-H civic engagement projects is available at https://4h.ucanr.edu/Projects/CivicEngagement/		
	Consumer Economics/ Education	For the member who is interested in wise purchasing for themselves and others. Members will learn to balance needs, wants, and resources by setting priorities and weighing alternative. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Domestic Exchanges	4-H members and volunteer leaders establish a two-way exchange with 4-Hers from another state or another county within California. The groups take turns hosting one another on consecutive summers.		
	Economics & Business	This project helps prepare youth to be successful as they enter the market and learn basic economic principles of a free market system, investigate the stock, bond, fund, cash, and futures markets, and explore U.S. industries and their impacts on the American economy. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Global Education	Foster cross-cultural awareness, cooperation and understanding about other countries. Learn to live and work effectively in a global society. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Hi 4-H (grades 9 to 12)	A Civic Engagement and Community Pride project for high school 4-H members.	Primary	
	Marketing	An advanced study in any project field. A special study (including tours) of different types of businesses, a roadside stand, or the commodity marketing program.		
Community / Volunteer Service	Community Service	In this project youth learn the value of helping others, develop leadership, communication, organizational skills, and a sense of empowerment, and build self-esteem from the positive results of their service.		4-H Million Trees
	Youth-led Participatory Action Research (YPAR)	Youth-led Participatory Action Research (YPAR) is designed to empower youth and center youth voices in Policy, Systems, and Environmental change interventions and community leadership. YPAR’s adaptive, flexible approach trains youth to design and conduct a research project based on the questions and concerns they have about their school and/or community. Resource: https://uccalfresh.ucdavis.edu/initiatives/ye/ypar		
	Service Learning	Learn how to step-up a community service project to a service-learning project and make a greater impact on your community while learning new skills. https://4h.ucanr.edu/Projects/CivicEngagement/service_learning/		



Civic Engagement (continued)

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Communications and Expressive Arts	American Sign Language	Youth learn how to “talk” with their hands and “listen” with their eyes using American Sign Language (ASL). Explore the language, culture, and history of the Deaf community. Interact with the Deaf community by using the basics of ASL. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Arts & Crafts	Learn life skills and grow in project knowledge while making creative items or projects by hand. The project will teach skills, techniques and tools in drawing, painting, fiber arts, papercrafts, and more. This includes but is not limited to, any of the following: jewelry making, fly tying, macramé, decoupage, stained-glass, making, pottery, ceramics, and hobbies such as coin or stamp collecting.		Beginner, Intermediate, Advanced, Book binding, Bracelet making, Calligraphy, Candle making, Card making, Decoupage, Drawing, Fly tying, Jewelry making, Macramé, Painting, Papercraft, Scrapbooking, Stained-glass making, Tie-dye, pottery, ceramics, and hobbies such as coin or stamp collecting
	Ceramics & Clay Arts	Learn how to make items or projects out of clay. Depending on your skill level, you may learn how to make clay items using a variety of hand building methods and/or wheel throwing and there may be an age requirement. This project could include glaze application, decoration techniques, firing processes, design critique and aesthetics, and history of ceramics.		Beginner, Intermediate, Advanced (age 9 & older)
	Communications	Develop oral and written communication skills. Learn about various methods used to communicate including speech and writing. Project may elect to focus on various historical or modern technologies used for communication. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Creative Writing, Social Media
	Cultural Arts	Learn about and/or participate in leisure-time activities that enhance the quality of life. These activities include, but are not limited to dance, drama, theatre arts, music, singing, and museum work.		Dance, drama, theatre arts, music, singing, museum work
	Dance	Learn the history and various styles of dance. Leader may wish to specify type of dance that will be taught in the project.		
	Drama & Theater Arts	Learn about everything involved with theatre! Members work together to develop a performance including music, dance, acting, stage creation, and scripts.		Puppets
	Graphic Arts	Members will learn the art of printmaking and drawing, using either historical or modern techniques.		



Civic Engagement (continued)

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Communications and Expressive Arts	Hobbies	Hobbies are practiced for interest and enjoyment. Various 4-H hobby projects may focus on collecting, art, making, or tinkering.		
	Language	Learn to speak a language. This project may focus on how to speak, listen to, read, or write or the culture and history of language speaking communities.		Spanish, French, etc.
	Leathercraft	Learn to design, make, and decorate leather furnishings and wardrobe items.		
	Music & Instruments	Learn to play one or various instruments. May include information on writing and reading music.		Guitar
	Singing/Vocal	Learn and explore areas of expression using the body and voice to convey a message in a performance through pitch, diction, dynamics, etc.		
	Photography	Learn to use photographic equipment and take and/or develop photographs.		
	Public Speaking	Members will learn how to properly prepare and give a demonstration or talk. This may include any number of props education in areas such as posters and PowerPoint. May include members participating in events such as Presentation Day. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Presentation
	Radio Broadcasting	Learn aspects of radio broadcasting which could include writing scripts, conducting interviews, recording skills, technical audio editing, and the history of radio while gaining leadership skills, reading, and speaking confidence, and connection with the local community. May include partnership with local radio stations.		
	Scrapbooking	Learn how to make a scrapbook to commemorate events or people using photos, mementos, and basic scrapbooking tools.		
	Tabletop Gaming	This project introduces youth to the fundamentals of game theory and game mechanics through experiential playing and reflection on games. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
Video Production	Learn about the science of videotaping, editing, and distributing a finished product. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Film making, TV production, Stop Motion Animation	



Healthy Living

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Health	Cake Decorating	Members learn how to decorate a cake according to their tastes. Cakes may vary from advanced to very basic. The project may be designated for beginners to advanced skill levels. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Cake Decorating: Beginner, Advanced
	Baking	In this project, youth learn about foods by partnering in the kitchen to plan and create baked goods. They explore the science, nutrition and history of baking while promoting healthy eating and resource management. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Bread making	Learn the many methods and history of bread making. May include traditional practices or machine practices. May include commercial introduction. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Cooking	In this project, youth learn about foods by partnering with adults in the kitchen to plan and cook food, explore the science, nutrition, and history of cooking while promoting healthy eating and resource management. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Advanced Cooking, International cooking, Outdoor cooking
	Food Preservation	In this project youth will learn a variety of food preservation methods while making delicious foods, explore fun facts about nutrition, produce, and history of food preservation and engage in real life applications of science and mathematics such as heat transfer, chemistry, and measuring. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Beginner, Intermediate, Advanced
	Foods	Learn how to shop for, prepare, and serve nutritious food safely, and how to maintain good health through a good diet. Food may be whatever the leader selects, with subcategories including but not limited to: Beginning, Dairy, International, Nutritional, and Preservation.		Beginner, Intermediate, Advanced, Candy making, Dairy, International, Nutritional, Preservation
	Health	This project concentrates on personal health and well-being. Learn how to stay healthy by understanding basic health concepts. Participate in community health education and learn about different health services and related public misconceptions. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Junior Master Food Preserver	Requires County Director and Advisor approval with participation of a Certified Master Food Preserver. Youth must have completed the Beginning Food Preservation Project. Youth will extend their knowledge of the science and art of safe home food preservation and to extend this knowledge with others in their communities. Resource: https://4h.ucanr.edu/Projects/HealthyLiving/Jr_Master_Food_Preserver_4-H_Project/		Beginner
	Mindfulness	Mindfulness is the practice of paying attention in the present moment and accepting it without judgement. Being mindful is to experience moments with openness and to be aware of the present. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		



Healthy Living (continued)

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Health	Physical Fitness	Learn how to increase physical activity in a safe and fun atmosphere. Youth can participate in a variety of fitness projects including yoga, surfing, hiking, running, walking, strength training and more. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Kayaking, surfing, hiking, running
	School Wellness	Youth partner with adult leaders to promote health and wellness on their school campus. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Sports	Participate in and/or referee any group or individual sport including but not limited to volleyball, softball, soccer, basketball, football, skiing, sailing, roller-skating, and relays. Project can provide youth with the opportunity to build athletic skills and group communication. Participate in boosting public awareness. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Bowling, Football, Golf, Soccer, Volleyball
	Stress Management	In this project, youth partner with caring adults to explore ways they can reduce and manage their stress. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Yoga	Yoga is a type of physical activity that combines physical movement with breathing and focused concentration. Youth in the 4-H Yoga project learn breathing exercises, physical postures, and mindful practices that help strengthen the mind and body. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
Personal Safety	First Aid	Learn about life-saving methods such as CPR and first-aid. May include certification. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		CPR
	Emergency Preparation & Management	Learn about emergency preparation for individuals, families, and communities. Projects may make evacuation maps, emergency kits, and certify youth in the Community Emergency Response Team (CERT) process. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Safety	Learn to understand and practice the general concepts of personal safety, environmental safety, and public safety. May include self-defense as well as first-aid training. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		First Aid, Fire Safety, Self-defense

Science, Technology, Engineering and Math (STEM)

Ag in the Classroom	Ag in the Classroom	Learn about both commercial and non-commercial agricultural practices in a classroom environment. More information about California Ag in the Classroom is available at https://learnaboutag.org		
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Science, Technology, Engineering and Math (STEM) - continued

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Animal Science	Alpacas (4-H age: 9 & older)	Learn about Alpacas, their care and management. May also include information on their use as a wool or pack animal. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/	Primary	
	Amphibians	Learn about the care, feeding, management and characteristics of a variety of reptiles and amphibians. If they choose, members may care for one of these as a pet. These species may include Snakes, Turtles and Tortoises, and Lizards. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Toads, frogs
	Animal Husbandry	Animal husbandry is all about caring for animals. Most definitions specify farm or production animals, but the term can be applied to companion animals. This is a multifaceted topic including ethical consideration, food safety, sustainability and more. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Avian Bowl	Learn, study, and memorize avian facts and become proficient in poultry management and related subjects. Test knowledge through participating in Avian Bowls at the local, statewide, and national level. Resources: https://national4hpoultry.ca.uky.edu/content/avian-bowl		
	Bees	Learn about bees and their care and required equipment. Member may manage one or more hives while learning about the handling and sale of honey and the bee industry. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Birds	Explore different types of birds from across the globe. This project may also help youth learn about the types of birds that fit into their family's lifestyle and how to be an excellent caretaker of their pet. The project may include topics such as identifying different bird species and their characteristics, and more. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Exotic, Pigeons, Emus and Ostriches (4-H age: 9 & older)
	Cats	Learn about the care and feeding of household cats. May include management and grooming. Cats may be raised for pets, shows, or breeding. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Beef Cattle (4-H age: 9 & older)	Learn about the raising, care, management, judging and showing of cattle. Animals may be raised for meat, show, sale, or breeding. Members may raise animals for meat or for breeding. Opportunities are available for non-owners, but ownership is preferred. Subcategories include Calf Processing, replacement Heifer, and Veal Calf. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/	Primary	Replacement Heifer, Calf Processing, Veal Calf, Market/Meat Beef
	Dairy Cattle (4-H age: 9 & older)	Learn about dairy cattle, their care and management. Members may raise animals for milk, breeding, or sale as bred heifers. Ownership is preferred. Opportunities are available for non-owners. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/	Primary	(Dairy) Replacement Heifer
	Cavies	Learn the care, feeding, and management of cavies (guinea pigs). Members may raise animals for pets, market, showing, or breeding. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		



Science, Technology, Engineering and Math (STEM) - continued

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Animal Science	Dog	Learn about dogs, their care, and their feeding. May include obedience training of animal. Subcategories include Agility, Care and Training, and Stock. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Agility, Care and Training, Stock
	Guide Dogs and Service Animals (approval required)	Raise a puppy for Guide Dogs for the Blind, Inc., or a similar association. Applications are required and may be obtained through the 4-H office. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Equine Hippology/Judging (4-H age: 9 & older)	Hippology focuses around four phases: horse judging, written examination and slide identification, ID stations and team problem solving. The goal for this project is to prepare members for state and national contests. Resource: https://ucanr.edu/sites/4H_Equine/	Primary	
	Horses and/or Ponies (4-H age: 9 & older)	Learn how to care for, feed, and ride a horse or pony. The animal may be either owned or leased. Handicapped riding and the "horseless project" (learning about equines without access to one) are offered in some counties. Subcategories of this project include Breeding, Draft, Drill, Judging, Driving, English, Gymkhana & Dressage, Miniature, Trail Riding, and Western. More information on California 4-H Horse projects is available at https://ucanr.edu/sites/4H_Equine/ and https://4h.ucanr.edu/Projects/Project_Sheets/	Primary	Gymkahana, English, Drill, Horsemanship, Miniature, Trail, Western, Horseless
	Goats (4-H age: 9 & older)	Learn about goats and their general care, management, and various uses. Members may raise animals for pets, meat, breeding, sale, or show. "Goatless" projects may be offered. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/	Primary	Angora, Pack, Goatless, Breeding, Dairy, Market/Meat
	Goats: Dairy (4-H age: 9 & older)	Learn about dairy goats, their care and management. Members may raise animals for market, milk, or breeding. Opportunities are available for non-owners and owners alike. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/	Primary	
	Goats: Market/Meat (4-H age: 9 & older)	Learn about meat goats and their care and management. Animals may be raised for meat, show, sale, or breeding. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/	Primary	
	Goats: Nigerian	Goat project focused on Nigerian dwarf goats.		Pack
	Goats: Pygmy	Goat project focused on pygmy goats.		Pack
	Poultry	Learn about domesticated birds used for meat and egg production to fancy breeds being shown in competition which include ducks, chickens, and turkeys. Learn how to care for and raise chickens, responsibility and humanely, best management practices used on farms and industry, value of poultry meat and eggs in human nutrition and how to grade eggs, and showmanship and showing techniques; breeds and anatomy of various types. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Chickens, Turkeys, Ducks, Quail, Judging, Emu, and Ostrich (no primary members)



Science, Technology, Engineering and Math (STEM) - continued

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Animal Science	Poultry: Market/Meat	Learn how to properly care for raising market poultry (chickens, turkeys, and ducks) responsibly and humanely. Focus on meat production and understanding where our food sources start. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Turkey, Chicken, Duck, Quail
	Llamas (4-H age: 9 & older)	Learn about llamas and their care and management. May include information on their use as pack or wool animals. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/	Primary	
	Livestock Judging (4-H age: 9 & older)	Learn how to judge various species of livestock according to breed or market specifications. May include, but are not limited to, species such as Cow, Horse, Sheep, Goat, Swine, Turkey, Chicken, Rabbit, Cavies, Dogs, and dairy species such as cows, sheep and goats. May include instruction in carcass and egg judging. Resources: http://4h.ucanr.edu/Projects/STEM/SET_Projects/Animal/SLJC/ and https://4h.ucanr.edu/Projects/Project_Sheets/	Primary	
	Rabbits	Learn the care, feeding, and management of rabbits. Members may raise animals for pets, fur, show, meat, or breeding. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Rabbits: Market/Meat	Learn the care, feeding, management, and breeding of rabbits raised for meat production.	-	
	Reptiles	Learn about the care, feeding, and management of various species of reptiles. These species may include Snakes, Turtles and Tortoises, and Lizards. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Sheep (4-H age: 9 & older)	Learn about the care and management of sheep. Members may raise animals for pets, show, wool, breeding, or sale. Ownership is preferred. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/	Primary	
	Swine (4-H age: 9 & older)	Learn about the care and management of swine. Members may raise animals for pets, show, sale, meat, or breeding. Ownership is preferred. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/	Primary	
	Therapeutic Large Animals (4-H age: 9 & older)	Learn about the care and training of large therapeutic animals. Members may be training or assisting with a therapeutic animal during the animal's working hours. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/	Primary	
	Therapeutic Small Animals	Learn about the care and training of small therapeutic animals. Members may be training or assisting with a therapeutic animal during the animal's working hours. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
Biological Sciences	Embryology	Learn about the stages in the development of an egg embryo. Members may hatch eggs and study the development at regular intervals, preserve embryos and make reports.		
	Entomology	Learn to collect, identify, and possibly mount insects. Learn about insect's individual traits and habitats, and their relationship with humans in their uses and control.		



Science, Technology, Engineering and Math (STEM) - continued

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Biological Sciences	Marine Biology	Learn about marine biology including plant and animal life in the ocean. Marine science focuses on biological aspects of the ocean while oceanography focuses on the geological and meteorology aspects.		
	Veterinary Science	Learn about the range of behavior and characteristics of a normal animal. Learn about diseases, their causes and prevention, and precautions to control those diseases that affect humans. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Veterinary Science: Biosecurity	The goal of this project is to teach participants how to keep themselves and their animals safe in a variety of situations. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Zoology	Learn about animals, their classification, and physical traits. May include learning about habitats and animal interactions with humans.		
Consumer and Family Science	Child Development and Care	Learn how children grow and respond, and how to care for children and build relationships with small children. Appropriate activities for 10- and 11-year old youth are included as well as activities for the early and mid-teens. This project may focus on the safety, training and care needed to be a babysitter. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Babysitting
	Crocheting	In this project, youth learn about crocheting through the exploration of fiber arts, fashion, and personal style. They partner with adults to design and create crocheted creations. The 4-H crochet project may include design, crocheting, application of new techniques and more.		
	Fashion Revue	Introduces members to the idea and basics of modeling a piece of clothing or accessory in front on an audience. Items need not be made by member in some cases. May include the attendance of a Fashion Revue. Resources: https://ucanr.edu/sites/sfd/Competitions/State_Fashion_Revue/ and https://4h.ucanr.edu/Projects/Project_Sheets/		
	Fiber Arts	May include any craft which uses fiber as its main point. May include project such as felting, weaving, embroidery, needlepoint, tapestry, lace making and appliqué.		Embroidery, needlepoint, needlework, tapestry, lace making and appliqué.
	Flower Arranging	Learn how to tastefully arrange flowers and other objects for use as decoration. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Home & Personal Management	Home management utilizes the same principles that are applied in business or to our personal life. All of us make decisions, establish priorities, set goals, and chart progress with records. Members will learn how to make effective use of limited resources to reach goals.		



Science, Technology, Engineering and Math (STEM) - continued

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Consumer and Family Science	Home Arts	Home Arts covers a wide array of projects where youth can learn arts & crafts, sewing, fiber arts, cooking, cake decorating, food preservation, photography, table settings, and much more in one project.		
	Knitting	In this project, youth learn about knitting through the exploration of fiber arts, fashion and personal style. They partner with adults to design and create knitted creations. The 4-H knitting project may include design, knitting, application of new techniques and more.		
	Quilting	In this project, youth learn about quilting. They partner with adults to design and create quilted items. The 4-H quilting project may include quilt design, learning about quilting patterns, piecing, quilting, hand quilting, machine quilting, color coordination and much more. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Sewing	In this project, youth learn about textiles, fashion, and personal style. They partner with adults to design and create sewn clothing and accessories. The 4-H sewing project may include sewing, design, clothing repair and more.		Beginning, Intermediate, Advanced, Fashion Revue
	Table Setting	Members learn how to properly set and display a table for both formal and non-formal situations. May include a section on proper etiquette.		
Environmental Education and Earth Sciences	4-H Camping (Overnight)	Members learn how to safely camp overnight in varying terrains. May include an overnight trip. More information on California 4-H camps is available at https://4h.ucanr.edu/Programs/Camps/		
	Astronomy	Learn about celestial bodies and migrations. Members will discover constellations and seasonal changes. May include a short course on telescopes.		
	Citizen Science	Citizen science is public participation in scientific research in collaboration with scientists in community-driven research or global investigations and includes asking questions, formulating a hypothesis, collecting, and reporting data, interpreting the results, asking more questions, and reporting the results to the community. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Climatology/Climate Science	In this project youth will study climatology and how prevailing weather conditions in specific geographic regions change over years, decades, centuries, and eras, affecting the plants, animals, and other life in the region. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Environmental Stewardship	Stewardship is an ethic that embodies cooperative planning and management of environmental resources with organizations, communities, and others to actively engage 4-H age in the prevention of loss of habitat and facilitate its recovery in the interest of long-term sustainability. Resources: https://4h.ucanr.edu/Projects/STEM/SET_Projects/EE/ and https://4h.ucanr.edu/Projects/Project_Sheets/		



Science, Technology, Engineering and Math (STEM) - continued

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Environmental Education and Earth Sciences	Fishing	Members learn the delicate art of tying flies for fishing. Fishing methods taught may vary from fly fishing to deep sea fishing to lake fishing.		Sports, Fly Tying
	Forestry	Forestry is the science of managing forests. Learn about planting and growing trees, the use of timber, wildlife habitat, recreation, landscapes, watershed management, erosion control and many other forest ecosystems concepts. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Hiking	Hiking provides opportunities to be active while spending time in interesting, inspiring, and/or beautiful landscapes. Youth partner with adult leaders to explore natural landscapes, human impacts on the environment, outdoor safety, and eating healthy in the outdoors. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Making & Tinkering	Youth will plan, design, and make technology-based projects, emphasizing playful tinkering, problem solving, and engineering design. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Oceanography	Learn about ocean currents, waves, plate tectonics and geology of the sea floor. Marine science focuses on biological aspects of the ocean while oceanography focuses on the geological and meteorology aspects.		
	Outdoor Adventure	Recreational activities that take place in the beauty of the great outdoors. Youth may participate in a variety of outdoor activities, including hiking, biking, boating, and camping. Youth learn to safely participate in those activities. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Hiking, biking, boating, camping, outdoor cookery, topographic map reading, and outdoor survival
	Outdoor Adventure: Camping	Camping provides opportunities to be get out and enjoy the outdoors while spending time in interesting, inspiring, and/or beautiful landscapes. Youth partner with adult leaders to explore natural landscapes, human impacts on the environment, outdoor safety, setting up camp spaces and eating healthy in the outdoors. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Pollinators	Learn about the many types of pollinators and their essential link in nature.		
	Project Learning Tree	Project Learning Tree uses trees and forests as windows on the world to increase students' understanding of the environment and actions they can take to conserve it. It helps develop students' awareness, knowledge, and appreciation of the environment, builds their skills and ability to make informed decisions, and encourages them to take personal responsibility for sustaining the environment. https://www.plt.org/alignment-to-standards/nonformal/4-h		
	Science Literacy	A project aimed to teach scientific concepts to youth and increase their scientific literacy. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		



Science, Technology, Engineering and Math (STEM) - continued

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Environmental Education and Earth Sciences	Social Science	Social sciences are the studies of society and humans, with fields in anthropology, communication, education, history, geography, linguistics, political science, psychology, health, and sociology. Youth will raise questions, gather, analyze, discuss, display, and communicate data. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Soil & Water Conservation	Learn to understand the importance of soil and water conservation in everyday living. Included will be a study of our renewable and non-renewable resources and how they affect our quality of life.		
	Wildlife	Learn about local and exotic wildlife, their habitat, and value to ecosystem and economics. Includes information on the conservation of wildlife. May include work with a relocation/rehabilitation program.		
Physical Science	Energy Management	Learn about limited and renewable sources of energy. Learn uses, impacts, costs, and management of both traditional and alternative energy forms. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Solar Power, Alternative Energy
	Geology	Learn about the study of solid and liquid matter constituting the Earth. May include learning about minerals, jewelry, and field trips to geologic formations. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
Plant Science	Aquaponics	Learn to grow fish and plants in an aquaponics system. May include different system designs, planning and setting up a system, selecting fish and plants, and system management.		
	Field Crops and Management	Learn to grow and market any commercial type of field or row crop. May include some information on commercial methods, sustainable agriculture, and environmental issues.		Sustainable Agriculture, Viticulture
	Gardening	Youth will Learn how to plan, plant, maintain and cultivate their own plant life for beauty, health, and cuisine. This project will give youth an opportunity to learn that plants play a vital role for animals and humans. This includes growing vegetables and/or market crops and organic gardening.		Vegetable, Market crops, Flower, Fruit, Nuts and Berries. Indoor and Mini Gardens
	Junior Master Gardener	Junior Master Gardener program cultivates leadership and volunteerism by utilizing fun, hands-on horticultural projects. https://4h.ucanr.edu/Projects/STEM/SET_Projects/Gardening/		
	Plant Science	Learn about how plants grow, reproduce, evolve, and adapt, as well as how plants are used for food, fiber, and ornamental purposes.		
	Plant Science/Horticulture Judging	Increase knowledge of horticultural plants and horticultural/plant science techniques and expand personal ability to identify various plants. This project prepares youth to participate in CA 4-H State Field Day in the Plant Science competition https://ucanr.edu/sites/sfd/Competitions/Plant_Science/		



Science, Technology, Engineering and Math (STEM) - continued

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Technology and Engineering	Aerospace & Rocketry	Learn about one of more of the categories. May include designing, building, or demonstrating flying or non-flying gliders, airplanes, drones, or rockets.		Aviation, Drones, Model Airplanes
	ATV (All-Terrain Vehicles) (4-H age: 9 & older)	Learn the care and maintenance of All-Terrain Vehicles (ATVs), as well as safety practices. May include the planning and implementation of an excursion. 4-H Clover Safe Note on ATV Safety and California ATV 4-H age and safety laws may be found at: https://ucanr.edu/sites/safety/files/1567.pdf	Primary	
	Dirt Biking (4-H age: 12 & older)	Learn the care and maintenance of dirt bikes, as well as safety practices. May include the planning and implementation of an excursion. 4-H Clover Safe Note on ATV Safety and California ATV 4-H age and safety laws may be found at: https://ucanr.edu/sites/safety/files/1567.pdf	Primary	
	Automotive (4-H age: 9 & older)	Learn safety in the care and use of the automobile. May include maintenance and repairs, cost, and responsibilities of car ownership, and driving skills.	Primary	
	Bicycles	Learn the care and maintenance of bicycles, as well as safety practices. May include the planning and implementation of a bicycle excursion. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Maintenance
	Blacksmithing (4-H age 9 & older)	Learn a variety of blacksmith skills including creative arts as well as math, design, hand-eye coordination, and problem solving. Create items from wrought iron or steel using a forge to hammer, bend or cut objects into desired design.	Primary	
	Coding	Learn coding basics and build coding skills. May include Scratch, Java, Python.		Beginner, Advanced, Scratch, Java, Python, Game Design, Programming
	Computer Science: Unplugged	Learn computer science and the fundamentals of computer programming without requiring devices, electricity, or internet access, using resources like https://csunplugged.org		
	Computers & Internet	Learn about computer hardware and software. Projects may focus on specific software packages, general computer maintenance, or computer hardware identification and upgrading. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Construction & Building	Learn about general construction and engineering principles. Projects may focus on small or large construction activities and members will learn about how to design and build.		Woodworking
Electricity & Electronics	Learn the fundamental of electricity and its application as a source of energy and power. Learn to build and maintain electronics of varying complexity. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/			



Science, Technology, Engineering and Math (STEM) - continued

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Technology and Engineering	General Engineering	This project may be used as a catchall to include such things as drafting, home repairs, concrete work, general engineering, mechanical drawing and other industrial education, and mechanical science activities.		Maker Camp, 3-D printing
	Geocaching	Geospacial refers to the position of things on the earth's surface. Youth will learn about the adventure and skill of Geocaching as a real world, outdoor treasure hunting experience using GPS-enabled devices to navigate to a specific set of GPS coordinates to find the cache. The 4-H geocaching project may include leaning to navigate with GPS coordinates; field trips to cache sites; learning to make your own cache and more.		
	GIS/GPS	GPS is a navigational system that can accurately locate your position. GIS is a computer program for storing, retrieving, analyzing, and displaying spatial data. Projects may focus on one or both or introduce members to geo-caching. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	LEGO®	Learn to use LEGOs creatively to construct various builds, which will help develop skills in logical mathematical thinking, scientific reasoning, computational thinking, and problem solving.		Robotics
	Machinery (4-H age: 9 & older)	Learn to maintain and safely operate machinery or equipment.	Primary	Farm equipment, automobile
	Robotics	Learn about the science and technology of robots and their design, manufacture, and application.		
	Shooting Sports: Archery (4-H age: 9 & older)	Members will learn how to safely operate and maintain archery equipment, as well as learn how to shoot. This project may include bow-hunting or target practice, and often includes competitions. 4-H Archery projects may only be led by a 4-H-certified adult 4-H volunteer or staff. For more information, please visit https://4h.ucanr.edu/Projects/STEM/SET_Projects/ShootingSports/	Primary	Beginner, Advanced
	Shooting Sports: Hunting (4-H age: 9 & older)	Learn to safely operate and maintain guns and equipment. This project may include target practice, hunting, or competitions. Participants may engage in multiple disciplines while learning about hunting, including Archery, Muzzle Loading, Pistol, Rifle, and Shotgun. 4-H Shooting Sports projects may only be led by a 4-H-certified adult 4-H volunteer or staff. For more information, please visit https://4h.ucanr.edu/Projects/STEM/SET_Projects/ShootingSports/	Primary	Beginner, Advanced
Shooting Sports: Muzzle Loading (4-H age: 9 & older)	Learn to safely operate and maintain guns and equipment. This project may include target practice, hunting, or competitions. 4-H Shooting Sports projects may only be led by a 4-H-certified adult 4-H volunteer or staff. For more information, please visit https://4h.ucanr.edu/Projects/STEM/SET_Projects/ShootingSports/	Primary	Beginner, Advanced	



Science, Technology, Engineering and Math (STEM) - continued

National 4-H Categories	Primary Project	Description	Primary (4-H age: 5-8 years old)	Examples of Project Sub-Type
Technology and Engineering	Shooting Sports: Pistol (4-H age: 9 & older)	Learn to safely operate and maintain guns and equipment. This project may include target practice, hunting, or competitions. 4-H Shooting Sports projects may only be led by a 4-H-certified adult 4-H volunteer or staff. For more information, please visit https://4h.ucanr.edu/Projects/STEM/SET_Projects/ShootingSports/	 Primary	Beginner, Advanced
	Shooting Sports: Rifle (4-H age: 9 & older)	Learn to safely operate and maintain guns and equipment. This project may include target practice, hunting, or competitions. Subcategories include Hunting, Muzzle Loading, Pistol, Rifle, and Shotgun. 4-H Shooting Sports projects may only be led by a 4-H-certified adult 4-H volunteer or staff. For more information, please visit https://4h.ucanr.edu/Projects/STEM/SET_Projects/ShootingSports/	 Primary	Beginner, Advanced
	Shooting Sports: Shotgun (4-H age: 9 & older)	Learn to safely operate and maintain guns and equipment. This project may include target practice, hunting, or competitions. 4-H Shooting Sports projects may only be led by a 4-H-certified adult 4-H volunteer or staff. For more information, please visit https://4h.ucanr.edu/Projects/STEM/SET_Projects/ShootingSports/	 Primary	Beginner, Advanced
	Shooting Sports: Western Heritage (4-H age: 9 & older)	Learn to safely operate and maintain replica firearms and archery equipment of the frontier period (1860-1900), while expanding knowledge of U.S. history. This project may include target practice, hunting skills, competitive events or living history. 4-H Shooting Sports projects may only be led by a 4-H-certified adult 4-H volunteer or staff. For more information, please visit https://4h.ucanr.edu/Projects/STEM/SET_Projects/ShootingSports/	 Primary	Beginner, Advanced
	Small Engines (4-H age: 9 & older)	Learn about the care and use of a 2-cycle and 4-cycle gasoline and diesel engines in all home, farm, or recreational situations - from lawn and garden equipment to boats and motorcycles.	 Primary	
	STEM	This project introduces youth to important concepts through engaging in reasoning skills to help improve attitudes for interest in Science, Technology, Engineering and Math (STEM). Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		
	Website Design	Members learn how to design a website using either code or a specific program. May include a short section on graphic design and website management. Resource: https://4h.ucanr.edu/Projects/Project_Sheets/		Advanced
	Welding	Welding's usefulness can be applied to many areas of life through learning how to safely use tools to weld and complete metal working projects. The welding project teaches the full scope of welding practices and safety to design and create metal work projects.		Metal
	Woodworking	Learn to design, build, and finish a wooden item. Learn the safe use and care of woodworking tools and equipment.		

