

4-H Veterinary Science Proficiency Program A Member's Guide

OVERVIEW

The **4-H Veterinary Science Proficiency program** helps you learn what you need to know about your 4-H project. Your project leader will assist you in setting and achieving your goals. Through your project, you will learn animal care basics, good management practices and record keeping. You will also learn about the size and scope of the animal industry as it relates to your project.

There are many resources to help you learn more about your project:

- ◆ The **4-H Publications Catalog** lists a variety of project materials and resources recommended for use in your project.
- ◆ The **4-H Educational Resources Lending Library** at your county 4-H office includes other books, and other reference materials that may be checked out.
- ◆ Check to see if there are breed organizations, clubs or veterinarians in your community that conduct educational activities and field days. Check the University of California - Davis, Chico State University, and Sonoma State University websites for upcoming educational events.

There are five levels in the Project Proficiency Program. You may choose how many levels you wish to complete:

- **Level I – “Explorer”**, you begin to learn about many different aspects of Veterinary Science.
- **Level II – “Producer”**, you practice and refine the many skills involved in learning animal health, anatomy and diseases.
- **Level III – “Consumer”**, you become a knowledgeable in related careers and medical needs.
- **Level IV – “Leader”**, allows you to show your own leadership potential.
- **Level V – “Researcher”**, you carry out a demonstration or experiment on some aspect of Animal Science, and prepare a paper or portfolio.

The proficiency program is intended for junior members (9 years of age or in 4th grade) and above. As you work through the proficiency program, your leader will date each skill item as you complete it. When all items in a proficiency level are completed, your leader will sign the Certificate of Achievement and notify your 4-H office.

VETERINARY SCIENCE

Level I – Explorer

Initial & Date as Completed

- _____ 1. Identify 3 different types of animals and two breeds associated with each.
- _____ 2. Identify the basic anatomy of 2 large animals and 2 small animals from a diagram or live animal.
- _____ 3. Visit or virtually tour a veterinary clinic, dairy, ranch or other animal facility.
- _____ 4. Explain bio-security and give 3 examples of bio-security procedures.
- _____ 5. Describe the basic housing and equipment a beginner would need for the health, care, and safety for a specific species.
- _____ 6. Explain the importance of understanding the nutritional requirements for different species of animals.
- _____ 7. Explain why it is important to observe and understand animal behavior.
- _____ 8. Explain what ethics are and give 2 examples of ethical behavior related to animal husbandry.
- _____ 9. Create a basic emergency kit for your barn or pets.
- _____ 10. Explain what the following tools are used for in regards to animals: Stethoscope, Thermometer, and Ophthalmoscope.
- _____ 11. Describe the 6 major nutrient groups.
- _____ 12. Explain or identify the following terms: Dosage, Injection, Topical, and Water-soluble.
- _____ 13. Explain what a Quarantine Period is and why it is important.
- _____ 14. Explain 2 of the differences between warm-blooded and cold-blooded animals.
- _____ 15. Explain why you should monitor daily food and water intake.
- _____ 16. Help someone else by sharing your knowledge or by giving away a product from your project.

Member's Name: _____ Date: _____

Project Leader's Signature: _____ Date: _____

VETERINARY SCIENCE

Level II – Producer

Initial & Date as Completed

- _____ 1. Identify and describe the digestive and circulatory system in an animal.
- _____ 2. Define and explain what monogastric and ruminant is; identify 2 species for each.
- _____ 3. Identify the key differences in skeletal structure between at least 3 different species.
- _____ 4. Define the following terms and identify their function: bone, cartilage, ligament, joint, and tendon.
- _____ 5. Identify behavioral changes an ill animal may express. Explain the term, “Zoonotic”.
- _____ 6. Explain the terms: Mutualism, Parasitism, and Commensalism.
- _____ 7. Identify and differentiate between an endoparasite and ectoparasite; give at least two examples of each.
- _____ 8. List at least 5 items you should have on hand to treat an injured animal.
- _____ 9. Explain bio-security and describe or demonstrate how to sanitize equipment for at least 2 different species.
- _____ 10. Demonstrate how to give an animal a physical examination. Include 3 safety measures.
- _____ 11. Identify the different parts of a microscope and demonstrate how to operate it.
- _____ 12. Define the terms: intravenous, subcutaneous, and intramuscular.
- _____ 13. Demonstrate how to give an injection using an object such as an orange.
- _____ 14. Create an educational display relating to the veterinary science project and display in a public venue.
- _____ 15. Job shadow at or visit a veterinary clinic, dairy, research facility, or other animal facility.
- _____ 16. Give a presentation at your project meeting, club meeting or county presentation day, related to the veterinary science project.

Member's Name: _____ Date: _____

Project Leader's Signature: _____ Date: _____

KEEP IN YOUR RECORD BOOK WITH YOUR PROJECT RECORDS.

Approved by Lake County 4-H Council,

VETERINARY SCIENCE

Level III – Consumer

Initial & Date as Completed

- _____ 1. Describe epithelia or linings, connective or supporting, muscular, and nervous tissues and explain their functions.
- _____ 2. Explain the term, “Necropsy”.
- _____ 3. Describe the digestive system anatomy and physiology for an animal breed/species of your choice and how it differs from other breeds/species.
- _____ 4. State the normal vital signs (temperature, respirations, heart rate, etc) for at least 2 different species.
- _____ 5. Define and explain the following terms: Radiograph, Ultrasound, MRI, ECG/EKG, Centrifuge, and EEG.
- _____ 6. Make a chart to monitor an animal for at least 30 days; record respiration, pulse, food and water intake and behavior.
- _____ 7. Explain 3 diseases or health conditions and their treatments and/or preventions for an animal breed/species of your choice.
- _____ 8. Report on the basic history of veterinary medicine.
- _____ 9. Create a model or draw a eukaryotic cell and share it with your project.
- _____ 10. Demonstrate at least 3 different methods for administering medications. Include 2 safety precautions for each.
- _____ 11. Contact a local, state, or national animal association and report to your group what the association has to offer to its members and other interested individuals.
- _____ 12. Research and report on at least 2 career options in veterinary science.
- _____ 13. Keep a personal reference library of literature that will be helpful in your project and/or career of choice.
- _____ 14. Job shadow at a veterinary clinic, dairy, ranch, research facility, or university animal facility.
- _____ 15. Alone or with your group, plan and complete a community service activity related to your project.

Member's name: _____ Date: _____

Project Leader's Signature: _____ Date: _____

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VETERINARY SCIENCE

Level IV – Leader

Initial & Date as Completed

- _____ 1. Serve as Junior or Teen Leader in this project for one year.
- _____ 2. Assist younger members in designing and constructing needed equipment.
- _____ 3. Prepare teaching materials for use at project meetings.
- _____ 4. Develop and hold a field day or judging event or train a junior team for a judging activity.
- _____ 5. Speak on a project-based subject before an organization other than your 4-H group.
- _____ 6. Volunteer at a veterinary clinic, dairy, ranch, research facility or other animal facility.
- _____ 7. Teach younger members about a specific topic in the project.
- _____ 8. Develop your own special project related activity. Chart your own progress, plan the activities, analyze successes and problems, and report on your accomplishments to your club.
- _____ 9. Invite a guest speaker to one of your meetings and introduce them to your group.

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Project Leader's Signature: _____ Date: _____

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VETERINARY SCIENCE

Level V – Researcher

Initial & Date as Completed

- _____ 1. Carry through and report on the results of a demonstration comparing measurable differences in management procedure. (experiment)
- _____ 2. Prepare a paper of 300 words or more on one of the following topics:
- Management of animal.
 - Feeds, feeding, and nutrition.
 - Diseases, prevention and control, and general sanitation.
 - Markets and methods of marketing.
 - Reproduction, breeding, and genetics.
 - By-product preparation for market, how marketed, and used.
 - Keeping and using records as a basis for improving your animal project.
 - Careers in veterinary medicine
 - Other
- _____ 3. Prepare a speech or illustrated talk to orally summarize your findings and present at a club, project meeting or other educational event.

Member's name: _____ Date: _____

Project Leader's Signature: _____ Date: _____

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Approved by Lake County 4-H Council,

Certificate of Achievement

This certifies that

has completed the _____ Proficiency

in _____ County.

Explorer

Producer

Consumer

Leader

Researcher

Date

Date

Date

Date

Date

Leader's Signature

Leader's Signature

Leader's Signature

Leader's Signature

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