



# Illinois 4-H | Spark Ideas. Ignite Possibilities.

Are you interested in a career in keeping animals healthy and have an interest in science? Learn the role a veterinarian provides as an animal doctor, gain knowledge about how veterinarians treat and care for animals, and their involvement in protecting public health. Learn about diseases, health problems and career opportunities while participating in many hands-on activities.



## Exploring 4-H Vet Science

### Spark Activity: Not a Shot in the Dark

Animals and humans often need medication to help them get better when they are ill. Some medications are given orally, some are given by injection and others are given topically. The veterinarian will always note on the medication label how much to give, how often and how long to administer it.

How does the veterinarian know how much medication to give? First, animals are weighed. The medication label is then checked for the dosage rate. The dosage rate is usually given in milligrams or cubic centimeters per pound of body weight.

During this activity, you will determine the medication dose based on weight. You will need a scale, a one-cup measuring cup and a “medication” such as water or lemonade. Weigh yourself and a friend or adult and record this amount. For this activity, the dosage rate is one cubic centimeter (cc) of “medication” for every pound of body weight. Based on the weight, determine how much “medicine” should be given. Ask for help with the math if needed. Note: 1 cubic centimeter (cc) = 1 milliliter (ml); 5 cc = 1 teaspoon; 30 cc = 1 ounce; 8 ounces = 1 cup.

Example: If the individual’s weight is 150 pounds, and the dosage rate is 1 cc of medication per pound of weight, you would give 150 cc or 5 ounces.

(Activity from Airedales to Zebras, National 4-H Cooperative Curriculum System, 4HCCS BU-08048)



## 4-H Project Levels and Goals

### Beginner

- Learn about different animal species
- Explain roles animals have in society
- Learn about body systems and organs
- Study animal behaviors

### Intermediate

- Complete an animal health record
- Learn about animal diseases and how they spread
- Learn about animal parasites and their controls

### Advanced

- Study animal reproduction
- Study preventative medicine
- Learn about genetics
- Learn about veterinary careers

## Put Your Project Into Action

### Show Your Skills

- Interview a veterinarian and report on the various parts of his/her job
- Create a display showing the differences in animal digestive systems
- Research domestic animal health issues and how they affect people
- Compare and contrast various health management plans for two different species

### Service and Leadership

- Volunteer at a local veterinary clinic
- Volunteer at an animal rescue site
- Start a campaign encouraging pet owners to neuter and spay their pets
- Help members develop a health-care plan for their animal projects
- Assist with a local food safety quality assurance class for younger 4-H members
- Create a biosecurity informational sheet and kit for 4-H members to keep at their livestock areas
- Organize a pet first aid class through your local Red Cross chapter
- Teach youth how to be safe around different species of animals, both large and small, and wild and domestic

### Entrepreneurship

- Job shadow a veterinarian or veterinary technician
- Create a resume to use for volunteering at veterinary clinics

### Technology Connection

- Develop a video on proper hoof or nail care for an animal
- Develop a video or Power Point on ethics in the livestock industry

### Connecting with a Mentor

- Contact your local veterinarian or veterinary technician
- Illinois 4-H Livestock Ambassadors

### Events

- 4-H Illini Academies
- Illinois Youth Livestock Conference
- National 4-H Agri-Science Summit



### Careers for People Interested in Vet Science

Veterinarian  
Veterinary Technician  
Regulatory Medicine  
(USDA)

Public Health –  
Epidemiologist  
Researcher

## Start a Conversation

How do animals communicate? – observe and describe animal behavior in different species

What are zoonotic diseases and how do veterinarians help prevent them?

What education is required to become a veterinarian?

List five career specialty areas in veterinary science.

## Want to learn more?

[go.illinois.edu/4Hvetscience](https://go.illinois.edu/4Hvetscience)

## Explore more at Illinois 4-H!

[4-h.extension.illinois.edu](https://4-h.extension.illinois.edu)



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**Credits:** North Dakota 4-H Project Sheet | Wyoming 4-H Project Sheet | Michigan 4-H Project Sheet | Iowa State 4-H Veterinary Science Project Sheet | Illinois State Veterinary Medicine Association website: [www.isvma.org](http://www.isvma.org) | Illinois 4-H website | University of Illinois Extension staff that contributed to this resource include Martha Ebbesmeyer and Mary Finney | 4-H Spark Sheets are a collaborative effort of 4-H staff, volunteers, alumni and teens from across Illinois. A big thanks to the many contributors and reviewers!