

CARING FOR ANIMALS

Discover how we provide for animals and, by doing so, enrich our own lives



MISSISSIPPI STATE
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EXTENSION



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Caring for Animals 4-H Project Guide

Targeted Audience: Ages 12–15 (6th–8th grades)

Targeted Environment: 4-H clubs, camps, and schools (both classroom and after-school programs)

Overall Purpose: Develop informed citizens who can make decisions using critical-thinking skills and knowledge of the relationship between people, animals, and the environment. By using questions to develop a framework for thinking, youth will:

- think critically about the subject so they can make an informed decision.
- examine issues that do not have right or wrong answers.
- discuss targeted areas of ethics, responsibility, and animal well-being.

This manual was designed using the 4-H experiential learning model. Included is a list of the life skills youth learn while attaining skills within a specific content area. This publication is intended to be used as a workbook for students. Facilitators should encourage conversation with students about topics covered. Additional resources can be found on page 35.

Targeting Life Skills Model

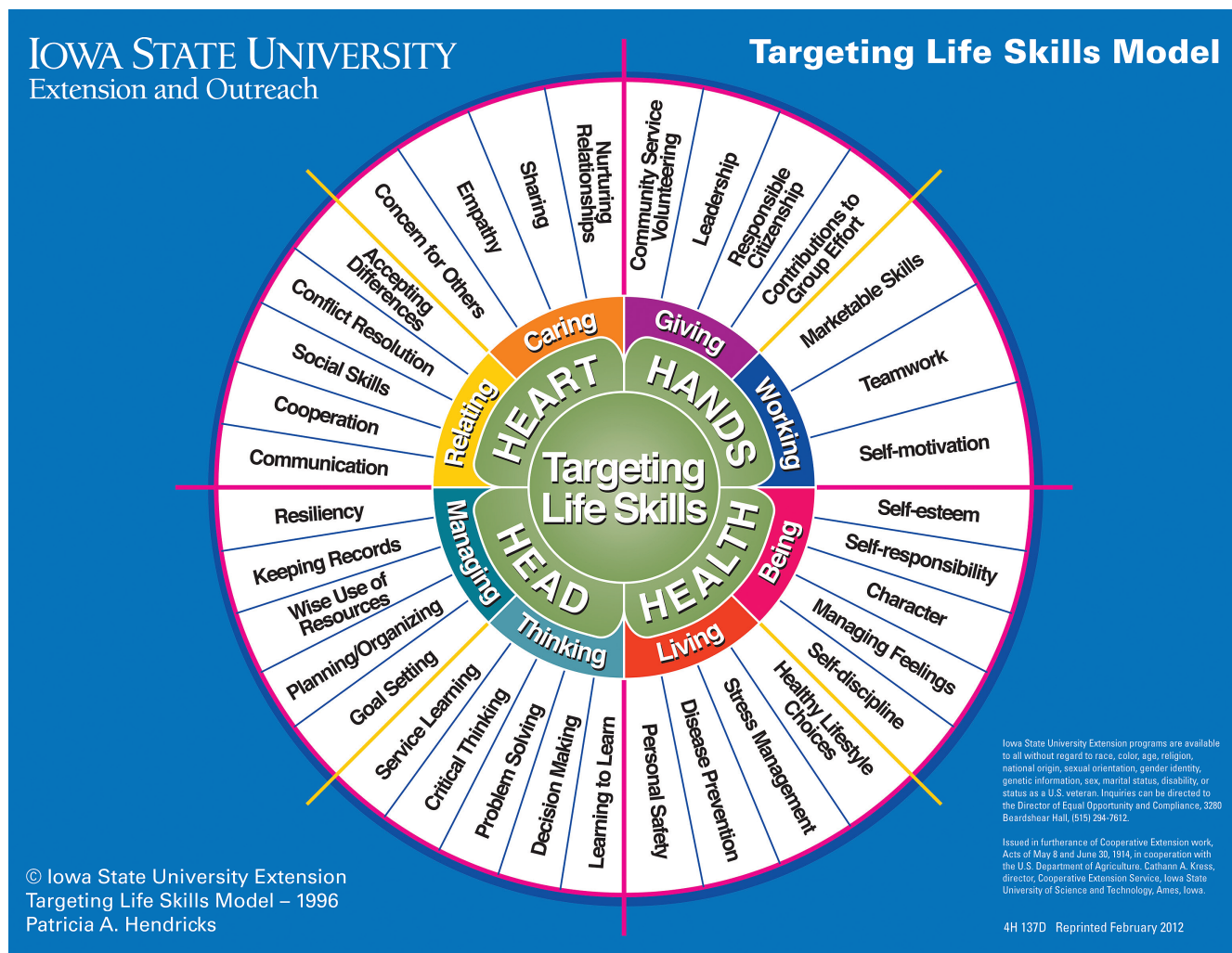
The Targeting Life Skills Model helps identify developmental life skills in 4-H and youth development education programs:

Head Thinking, managing

Heart Relating, caring

Hands Working, giving

Health Being, living



Experiential Learning Guide

A supportive adult helps young people discover what they are learning as part of their experiences and find deeper lessons to help them in other life situations. 4-H youth programs promote life-skill development through the use of a five-step sequential, experiential learning model.

Experiential Learning

Learning takes place when youth are involved in a project or activity. The students:

- look back at their experience critically.
- determine what was useful or important to remember.
- apply what they've learned to real-life situations.

Experiential learning encourages thinking, working harder, and, ultimately, learning more thoroughly than just showing and telling.



Image from University of Minnesota Extension 4-H (<http://www.extension.umn.edu/source/winter-2013/4-h-preparesyouth-to-lead-and-succeed/>). Adapted from D.A. Kolb, 1984.

Do, Apply, Reflect

Experience the activity; perform, do it.

Youth try the activity before being told or shown how.

Share the results, reactions, observations publicly.

Youth describe results of the experience and their reaction.

Process by discussing, looking at the experience; analyze, reflect.

Youth relate the experience to the targeted life skill.

Generalize to connect the experience to real-world examples.

Youth connect the life-skill discussion to the larger world.

Apply what was learned to a similar or different situation; practice.

Youth use the new life-skill experience in other parts of their lives.

Source: National 4-H Council



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Exploring Our Relationships with Animals

Queen Nefertiti looks out over the Nile delta from her limestone palace. She is lost in her thoughts when she is surprised by a desert cat pouncing on a bit of her robe trailing on the ground. She smiles and crouches down to take a closer look at the sleek, spotted cat that is now rolled on his side with the fabric between his paws frantically biting and kicking at it with his back legs as if he is locked in an epic battle. She says with a smile, “Thank you, my friend, but I think my robe is sufficiently dead.” She reaches out a hand to pet the cat’s head and he stops his mock killing to watch her with big, glassy eyes. Very loud purrs come from the cat’s throat as Nefertiti finds a favorite spot to scratch behind his ears. “You are a strange one. None of the other desert cats act to people like you do. I think I will call you Mafdet—after one of our cat goddesses. Come, let’s find you a nice place to nap.”

—historical fiction



Chapter 1

We Love Animals

How Animals Enrich Our Lives

Success Indicator

Students will demonstrate knowledge of the history of animal domestication and the many ways people interact with wild and domestic animals.

Life Skills Practiced

Critical thinking

Problem-solving

Project Skills Practiced

Students will describe ways that animals contribute to society as companions, as sources of food and fiber, and by performing work and service jobs.

About 6,000 years ago, cats were **domesticated** in Ancient Egypt. Rats and mice were attracted to the Egyptians’ food. Snakes, which hunt rodents, followed the rats and mice. The Egyptians allowed wild cats from the desert to move into their homes to kill the rodents and snakes. In return for their services, the people may have given food scraps to the cats to encourage them to stay. Soon the cats were living with people as pets.

Animal domestication was beneficial to the people and the animals. The domesticated cow or sheep received protection and regular feeding, and humans found keeping a herd meant having an easily accessible source of food, clothing, and labor. In those days, there were no grocery stores for buying food. Food came from hunting, gathering, or farming. Similarly, cats and dogs found that they would be fed some food scraps in exchange for guarding people’s homes and killing pests.

Humans and domesticated animals benefited from working together on tasks such as hunting for food. Egyptians were known to take their cats bird hunting with them, and early humans relied on the hunting instincts in their wolf-like dog companions. Spending more and more time together, benefiting from each other, and working

as a team resulted in long-lasting relationships between humans and the animals that walked into their lives.

People still find many benefits from living and working with animals. From animals, we receive food, fiber, help with work, and recreation, as well as the social and emotional benefits that come from having pets.

Human-Animal Bond

Many people value being close to animals. They develop a special relationship with animals called the **human-animal bond**. This emotional bond can develop through many interactions shared between humans and animals. For example, playing with a cat or training a puppy may make you feel good. Watching wild birds at a feeder makes some people feel happy. Animals can help improve a person's mental and physical health. Interactions with animals can reduce stress and feelings of loneliness. You may look forward to playing with a pet after getting home from a long day at school. In many homes, pets become valued members of the household.

There are many other ways people can benefit from the human-animal bond. We can learn from animals. For example, animals can help people improve their social skills. When you are training your dog, you learn how to help your dog understand you and you become better at understanding your dog. Learning to communicate with a pet can help people understand how to communicate better with each other. We also learn responsibility from taking care of animals. Pets and livestock require our care. They

must be fed and cared for, even if you are tired, even if it is cold outside, even if it is your birthday.

Food and Fiber

Animal products can promote the health and well-being of humans. Meat, eggs, milk, and honey are sources of food for people. The milk you put in your cereal comes from a dairy cow first, before you can buy it at the store. Milk is processed to make cheese and ice cream. Other animal products are used in their natural or more processed forms, as well.

Some clothing materials come from animals. Leather comes from animal hides and is used to make items such as shoes, wallets, jackets, and baseballs. Down, the soft feathers from geese, might fill your winter coat or your pillow. Wool from sheep and angora from goats are weaved to make cloth. Animal materials can be used in medicines and other products. For example, the fat from animals might be used to make soap.

Work and Service

Animals have unique skills and abilities that can help people. Many humans benefit from work and service animals. Work and service animals have the ability and willingness to be trained to do a job. A guide dog is trained to serve people who cannot see and need help with everyday activities, such as crossing the street.

Other animals have been trained to help with a variety of tasks. Oxen and horses are very strong animals. Humans have used this strength to pull plows, wagons, and other farm equipment. An animal's unique characteristics may make it a better fit for one task over another. In some places, it is still common to see horses used for ranch work or pulling buggies. Dogs may be used for herding sheep or cattle, hunting wild game, or searching for lost people.



Experience Activity 1

Match each animal to its product.

- | | |
|---------------------|--------------|
| 1. ___ dairy cattle | a. wool |
| 2. ___ beef cattle | b. down |
| 3. ___ fish | c. honey |
| 4. ___ bees | d. milk |
| 5. ___ pigs | e. hamburger |
| 6. ___ geese | f. eggs |
| 7. ___ chickens | g. bacon |
| 8. ___ goats | h. caviar |
| 9. ___ sheep | i. mohair |
| 10. ___ rabbits | j. angora |

Experience Activity 2

Find the words below in the word search puzzle.

ANTIBIOTIC	KENNEL
TURKEY	CATTERY
KITTEN	VACCINE
DOMESTICATION	MARE
VETERINARIAN	ELEPHANT
NUTRIENTS	WOLF
FLOCK	PARAKEET
ZEBRA	FOAL
PUPPY	GERBIL
RABIES	HAMSTER
RODENT	HERD
STALLION	

Y	A	K	T	F	T	B	K	G	Y	G	B	Z	B	N
D	F	S	U	P	O	N	M	Z	P	E	D	P	E	A
Q	O	I	R	Q	C	A	A	Y	P	E	E	N	F	K
R	W	M	K	H	R	I	L	H	U	F	X	U	O	C
V	O	B	E	E	D	R	T	N	P	A	I	T	C	O
T	L	D	Y	S	N	A	U	O	Z	E	B	R	A	L
C	F	T	E	D	T	N	K	I	I	C	L	I	I	F
D	Y	U	Y	N	B	I	E	L	I	B	R	E	G	P
Z	H	Z	U	R	T	R	C	L	P	P	I	N	W	U
V	P	Y	R	T	E	E	K	A	R	A	P	T	J	R
U	Y	A	E	T	N	T	G	T	T	A	Z	S	N	C
F	W	N	S	O	I	E	T	S	N	I	B	A	D	A
C	C	M	O	F	O	V	P	A	R	R	O	I	R	B
U	A	Z	V	R	Z	T	V	A	C	C	I	N	E	R
H	B	F	X	U	B	M	N	Y	W	M	P	W	H	S

REFLECT *Here's What I Know*

Remember what you learned about the Egyptians who domesticated wild cats. Do you think animals change in the process of domestication? If so, in what ways?

In what ways do they remain the same?

APPLY *The Next Step*

Describe three ways that a particular animal might benefit people's lives.

GENERAL QUESTION *Relate Pets, Wildlife, and Food Animals*

How have humans benefited from animals, including pets, wildlife, and livestock?

Pets _____

Wildlife _____

Livestock _____

How have pets, wildlife, and livestock benefited from humans?

Pets _____

Wildlife _____

Livestock _____

Chapter 2

New Best Friends

Choosing an Animal Companion

Success Indicator

Students will demonstrate knowledge of the unique characteristics of different animals and their special needs for care.

Life Skills Practiced

Critical thinking

Problem-solving

Planning/organizing

Project Skills Practiced

Students will demonstrate an understanding that wildlife managers and farmers make similar decisions about animal selection as pet owners do about their pets.

You may be studying this project because you have a pet, or you may be thinking about getting a pet. There is much to think about when selecting an animal companion. For example, it is important to consider where you live and what laws, regulations, or restrictions there may be about keeping animals. The animal's living situation is also important, so it is critical to consider your resources and the characteristics and needs of the potential pet.

Lifestyles

Selecting the pet that is right for you can be a difficult decision for you and your family. It will help to spend time thinking about your lifestyle. Your living situation and the time you can devote to a pet are important things to consider.

Some animals may just not fit well with your lifestyle or living situation. Imagine what your life might be like with a pet. Think about how you live and the way you spend your time throughout the day. You may leave for school in the early morning and not be finished with school until late afternoon. Then, after-school activities may keep you away from home until much later. Some animals may need training, which will take time and patience.

What will the pet need while you are away? Finding time to feed and care for a pet may be difficult if you have a busy schedule. Who will take care of the pet if you go on vacation?

Bringing a pet into your home or life can also affect your family and your neighbors. For example, what if you have a family member who is allergic to cats? Selecting a cat as a pet in this situation is probably not the right choice. A dog that barks all day may be upsetting to close neighbors.

Rules and Regulations

In your community, there may be rules or regulations that determine what kind of pet you can own. Your community includes all the places you live—your home, your city, and your state. Each of these places can have its own set of rules regarding pet ownership.

Before selecting a pet, you should research any regulations that apply to your situation. If your family rents their home, it is important to check with the landlord to see if they allow pets. Your neighborhood, city, or state might also have regulations that place restrictions on pet ownership.

For example, there may be laws requiring dogs to be on a leash or within a fenced yard. Pets may be required to have specific vaccinations, such as against rabies. You may



live in a neighborhood that does not allow you to keep certain kinds of animals, such as farm animals. You may be allowed only a certain number of pets.

Researching the rules in advance can help you decide what kind of pet would fit well with you, your family, and your community.

Resources

Having the resources to provide for your pet's needs is a key aspect of responsible pet ownership. In addition to time, two important resources are money and space. Providing for your pet's needs costs something. The initial purchase price of your pet is only a small part of the total cost of the animal throughout its life. There will be pet-related expenses for as long as you have your pet. For example, plan for the ongoing costs of food and veterinary care.

Another resource is space. Some pets use a larger space than others. Let's face it—you can't keep a pony in your bedroom. The amount of space the pet needs to feel comfortable depends on the pet's species, size, and activity level. For example, a cat might use less space than a large, active dog. Gerbils, hamsters, and other small pets may not use more than a countertop.

Pet Characteristics

While you are thinking about selecting a pet, take time to learn some of its characteristics. This can include behavioral characteristics such as its temperament or activity level.

Behavioral traits can vary between individuals of a breed or species. For example, some animals are more active while others may be calm. Some are nocturnal, meaning they are active at night. Will they disturb your sleep? Some animals prefer to live alone. Others, by nature, prefer to be part of a group. Even within a litter of the same species, individual temperaments vary greatly.

Besides size, there are other important physical traits you need to think about when choosing to bring a pet into your environment. For example, a pet that sheds may require more frequent grooming. Cold-blooded animals may require a specific temperature range to stay healthy.

Finally, remember that pets grow up and have long lives. The cute little kitten you are considering as your pet now will later become a bigger adult cat. Young, active puppies become old, lazy dogs. With age may come special health needs. Do the later life stages seem as appealing? Are you committed to caring for the pet for many years into the future?

You can find books about specific pets at the library or online. Breed associations are an excellent source of information on what to expect from your pet. Discuss your questions with a veterinarian and use the resources on pet selection available from the American Veterinary Medical Association.



On the Wild Side

Making a Home for Wildlife

Wild turkey and deer populations are thriving in many parts of the U.S. today. A few decades ago, that wasn't true. Wildlife managers worked to repopulate these animals, but only after considering the lifestyle of these and other animals. The environmental suitability of different regions of the country and how well the animals would fit in with human activities in the area were major considerations.

Some wildlife choose to live near us because they benefit from the relationship. For example, barn swallows build their mud-formed nests in the shelter of barns and porch roofs. They are beneficial to humans because they eat flying insects like mosquitoes. Some people build nesting houses for purple martins because these birds also control insects. Wildlife do not make good pets and, in some cases, are illegal to own.

Food for Thought

Selecting Food Animals

Farmers and ranchers choose the type of livestock they raise based on their knowledge and experience, the land and financial resources they have available, and their lifestyle choices. Some may have a wider knowledge and understanding of raising cattle instead of hogs, or maybe they prefer the lifestyle of ranching over milking cows. They also need to have the necessary resources, like land, access to feed and water, buildings, and supplies.

Certain places may be better suited to specific livestock enterprises than other places. For example, beef cattle can forage on land less suitable for other purposes, but hogs and poultry need access to grains, such as corn. In other parts of the country, the choice of livestock may be influenced by tradition. For these reasons, we see clusters of types of livestock production within certain regions of the country.



Experience Activity 1

Match the animal to its expected life span. Make a guess, and then check your answers against the key on page 34. You may use some answers more than once.

- | | |
|-------------------------|----------------|
| 1. ___ mouse | a. 25–30 years |
| 2. ___ hamster | b. 10–15 years |
| 3. ___ goldfish | c. 5–7 years |
| 4. ___ iguana | d. 2–3 years |
| 5. ___ guinea pig | e. 1.5–2 years |
| 6. ___ great dane | f. 8–10 years |
| 7. ___ miniature poodle | |
| 8. ___ horse | |

Were you surprised by any of the answers? Why or why not? _____

Why do you think it's important to know the average lifespan and size of a potential pet?

Experience Activity 2

You're getting a new pet and bringing it home tomorrow. What should you have ready for your new companion when he or she arrives? Draw a picture showing the habitat you will create in your home for the pet. Be sure to consider food, space, safety, comfort, and other important factors.

REFLECT *Here's What I Know*

List some characteristics you believe are important for a pet owner to have.

APPLY *The Next Step*

Pets may come from breeders, shelters, pet stores, or friends or neighbors. List pros and cons for each source.

	Pros	Cons
breeders		
shelters		
pet stores		
friends or neighbors		

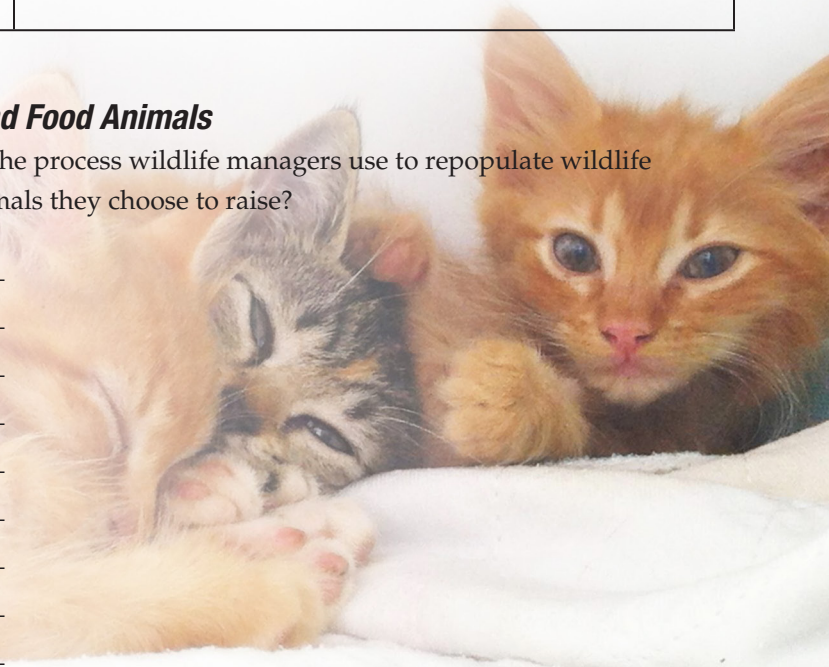
Choose an animal. List some pros and cons about having that animal as a companion.

Animal _____

Pros	Cons

GENERAL QUESTION *Relate Pets, Wildlife, and Food Animals*

How is the process you would use to select a pet similar to the process wildlife managers use to repopulate wildlife species, or the process farmers use to select the types of animals they choose to raise?



Chapter 3

Returning the Favor

How We Care for Animals

Success Indicator

Understand that animals need an appropriate living environment, balanced nutrition, and responsible care.

Life Skills Practiced

Critical thinking

Responsible citizenship

Problem-solving

Conflict resolution

Project Skills Practiced

Know the appropriate living conditions, nutritional needs, and special care needs for an animal of interest.

Animals need to live where it is clean, comfortable, and safe. They need a diet that meets their nutritional requirements. And they need care that promotes their well-being.

Environment

Animals need a clean, comfortable, and safe place to live. A clean place to live is important for disease prevention. Clean means relatively free from dirt and animal waste (urine and **feces**) and with good air quality. Animals that live in filthy or poorly ventilated environments may get infections that lead to sickness or death. A filthy animal **habitat** can also be bad for human health and well-being.

Comfort is a state of ease or well-being. Comfort may be a physical condition, like having a soft place to lie down. Maintaining the right temperature range can improve your pet's comfort and could be essential for its survival. For some animals, mud may cause stress and discomfort; however, other animals may find wet or muddy conditions desirable or necessary to live. Comfort can also be an emotional state, like feeling relaxed. For example, a cat that stares at your pet bird through the birdcage may cause the bird discomfort, even if the cat cannot physically harm the bird.

A safe environment is one that is free from dangers that can harm your pet. Physical hazards can be things like sharp objects or poisons. There are many safety hazards for pets. Exposed nails in a doghouse can cut your dog's skin. Electrical cords might be chewed and cause electrocution.



Chocolate or radiator antifreeze both taste good to pets but may be poisonous. Your car can be a source of danger if your pet is left alone in the car on a hot day.

Many pets are injured because their home environment is not safe. For example, a dog playing in a yard without a fence could run out into the street and be hit by a car. It is no secret that puppies and kittens get into trouble because of their curiosity and desire to chew things. Be aware of the many hazards in your pet's environment to keep them healthy and safe.

Nutrition

All animals require certain amounts of protein, carbohydrates, fats, minerals, vitamins, and water in their diet. Your pet uses these **nutrients** to maintain their bodily functions, grow, and reproduce. The nutritional needs of an animal differ depending on the pet's type, size, activity level, and **life stage**. For example, a young, growing animal needs more nutrients for each pound of its body weight than it will need later when it is fully grown. Animals that are pregnant or nursing babies need more nutrients to support the growth of their young. Pets that work or run long distances need more nutrients than less active animals. For example, sled dogs require a very energy-dense diet. The energy from their diet enables them to run long distances while pulling heavy loads in extremely cold weather.

Rations are diets formulated to provide the correct amount of nutrients for the needs of specific animals. Some animals have essential nutrient requirements. For example, cats require the **amino acid** taurine, while dogs do not. Guinea pigs require vitamin C in their diet, but many other animals can manufacture their own.

Often, pet food is formulated as a **complete ration**. For example, many commercial cat foods contain all the nutrients that a cat needs, including certain **essential amino acids** that cats need, but which may not be found in dog food. If the cat eats enough of this food each day, it will receive the appropriate nutrients to remain well nourished. If an animal fills up on less nutritious foods, like treats, it may not consume enough of the nutrients its body requires.

Water is an important nutrient, and animals should always have a plentiful source of clean water. Also, when animals are fed in groups, it is important to ensure that each animal receives its full share of the ration.

Care

Caring for a pet means assuring its well-being by promoting its health and protecting it from unnecessary harm. Pet care includes having plans in place to prevent and treat diseases. Disease is when normal bodily function is impaired. It is better to prevent disease than treat an illness after it has occurred. For example, in some places in the world, cats and dogs can get heartworm disease. Heartworm disease is caused by **parasitic** worms living inside of the affected animal's heart, making it more difficult for the heart to pump blood. This life-threatening disease is difficult to treat, but it is easy to prevent with medication.

There are many aspects of caring for animals. Providing your pet with a clean, safe, comfortable environment along with good nutrition and exercise will help keep your pet healthy. Some animals benefit from periodic grooming, including care of nails, claws, hooves, teeth, hair, and skin. **Vaccines** help the body develop a defense against specific disease-causing germs. Vaccine programs and routine physical exams by your veterinarian are examples of ways to prevent diseases or find and treat them early.

It is important to be able to recognize illness in your pet at an early stage. Early treatment is more likely to be effective. Early recognition of disease is easiest when you are familiar with your pet's normal condition and behaviors. Changes in appetite, feces, coat condition, or attitude are all indicators that something may not be right. Your veterinarian can be a great resource for determining why your animal is not feeling well and how to treat it.

On the Wild Side

Caring for Wildlife

Wildlife must be cared for, too. For example, wildlife managers have reintroduced wolves to some areas of the country. To do so, the wildlife biologists had to consider the wolves' need for food, shelter, and social interaction. Wolves are similar in many ways to the dogs we have as pets today. However, wolves must survive in harsh climates and conditions. Just like our pets, wolves require the appropriate nutrients and shelter to avoid the elements of nature. Wolves eat other animals to meet their nutritional requirements; therefore, they are **carnivores**. Wolves may prey on large game such as deer, bison, and elk and sometimes smaller prey such as rabbits, turkeys, and mice. Wolves live in dens, which provide shelter from wind, rain, snow, and heat. Wolves socialize and hunt together in packs of six to seven. Because of the attention to their care by wildlife managers, gray wolves in the Rocky Mountain region were recently removed from the endangered species list.

Food for Thought

Caring for Livestock

Cattle also need care. Cattle are **herbivores**, meaning they eat plants as their source of nutrients. Whether cattle are eating from a food trough (bunk) or eating grass in a pasture (foraging), the rancher has to make certain the cattle have access to the nutrients they need. Water is another very important nutrient, and access to water limits how far cattle can graze. In pens and barns, cattle usually drink from water troughs. In pastures, cattle drink out of streams, ponds, or water tanks provided for them. Ranchers check their livestock daily and monitor the grasses and water sources to make sure enough good-quality food and water is available to meet the animals' nutritional needs. Sometimes, such as when the ground is covered by snow, ranchers provide grass in the form of dried hay or other feeds that supply needed nutrients. Ranchers may provide supplemental feed with extra protein, energy, minerals, and vitamins to meet the nutritional requirements for the life stage of the cattle, such as growing calves or pregnant cows.



Experience Activity 1

Use the example dog food label on this page to answer the questions on the next page.

NUTRITION FACTS				
Example Suggested Daily Feeding for Dogs (Example)*				
Serving Size (cups) based on life stage				
Size (lb)	Puppy (up to 6 months)	Adult	Active Adult	Senior
5–10	½–1½	½–1	¾–1¼	¼–½
11–20	1½–2	1–1½	1¼–2	½–¾
21–30	2–3	1½–2	2–2½	¾–1
31–50	3–4	2–2½	2½–3½	1–1½
51–75	4–5	2½–3½	3½–4½	1½–2½
76–100	5–6	3½–4¼	4½–5	2–4
greater than 100	add ¼ cup for every 10 lb over 100 lb			

*Example for the purposes of this activity only. Follow the food manufacturer's guidelines or your veterinarian's advice.

Feeding puppies at weaning	Allow puppies to have solid food at 3–4 weeks of age. Moisten with water. Provide free choice until fully weaned (up to 8 weeks).
Feeding growing puppies	Feed puppies regularly (2–3 times daily). Follow feeding guidelines and monitor for ideal body condition.
Feeding during reproduction cycle	Food requirements may double or even quadruple for pregnant and nursing animals, to maintain body condition.
When switching dog foods	Allow 7–10 days for switching dog foods. Mix new food and old together with less old food every day until only feeding new food.
Clean water	Make sure clean water is available to your dog at all times.

Monitoring Body Condition

Too Thin	Ribs and bones of the hip are prominent. Increase feed intake for 2–3 weeks and reevaluate body condition. Continue to increase until dog reaches ideal weight.
Ideal	Can feel individual ribs. Dog has defined waist when seen from above. Abdomen is flat. Continue current feeding program.
Too Heavy	Difficult to feel individual ribs. No waist is visible when seen from above. Abdomen is rounded. Decrease feed intake for 2–3 weeks and reevaluate body condition.

How much dog food is needed to feed a 25-pound puppy?

How much dog food is needed to feed a 25-pound dog each day if the dog is an active, mature adult?

How much dog food is needed to feed a 25-pound dog each day if it is an old, inactive dog?

If a 20-pound bag of dog food contains 80 cups of food and costs \$16, how much will it cost to feed a 25-pound adult dog for a year?

\$ _____

Why is a different amount of food required per pound of body weight for a puppy compared to later as a grown dog?

What is body condition and why is it important?



Experience Activity 2

Have an adult moderator read the following statements to students. Designate a “yes” side of the room and a “no” side. Students answer each question by moving to one side of the room or the other. Select students to defend their position. Students may change their position throughout the discussion by moving to the other side of the room.

1. A cattle farmer sells his cattle to make food for people. Does this mean he doesn’t care about his animals?
2. A family has a dog but they are moving into a new apartment that does not allow dogs. They cannot find anyone willing to keep the dog. Should the family take the dog to a shelter?
3. Wildlife biologists want to preserve lions in Africa. Should they work to populate the area with antelope, zebra, and other animals so they can be killed and eaten by the lions?

REFLECT *Here’s What I Know*

How do we take care of wild animals? _____

What are the motivations for farmers to provide:

nutritious foods? _____

clean living space? _____

comfortable housing? _____

healthcare to their livestock? _____

APPLY *The Next Step*

A family’s pet cat gets sick and needs very expensive medication to get better. The family decides that they cannot afford the medicine. What should they do?

GENERAL QUESTION *Relate Pets, Wildlife, and Food Animals*

How do wildlife managers and farmers provide care for the animals they work with?

Is the process different than the way you might care for a pet?

Chapter 4

Hay Neighbor!

Animals in Society

Success Indicator

Students will demonstrate an understanding that animals interact in both desirable and undesirable ways with other animals, people, and the environment.

Life Skills Practiced

Critical thinking

Responsible citizenship

Empathy

Conflict resolution

Project Skills Practiced

Students will understand societal concerns related to unwanted pets and invasive species.

As your pet goes about its life, its actions may have a positive or negative effect on people, other animals, or the environment.

Interactions with Humans

Some pets may live in an aquarium or other confined space, but other animals interact with humans in our homes, in our yards, and out in the neighborhood. These interactions with human society may be positive or negative. A pet whose actions around humans or other animals are positive is more acceptable to society. For example, a dog that barks at people in your neighborhood, or a family dog that jumps on visitors, may not be behaving as a good canine (dog) citizen.

Animals without good manners can make people feel uncomfortable or even scared. Some animals, like dogs, can be trained to behave as good citizens in society. Obedience classes are a good way to learn about animal handling and care, and to strengthen the relationship you have with your pet.

People must also behave appropriately around animals to ensure that no one gets scared or injured. Like people, animals have a personal space. They feel uncomfortable when someone enters this invisible zone around them. The animal's reaction may be to fight or try to run away. Be aware of an animal's personal space to keep everyone safe and free from harm. Reaching out to pet a strange dog can scare it, and its reaction might cause harm to you or the pet. Before reaching to pet a dog, ask the owner if it is okay to do so. An animal's body language may help you recognize that you are too close.

Some diseases are shared between humans and animals. A disease that can be transmitted between humans and animals is called a **zoonotic disease**. Rabies is one example of a zoonotic disease, but there are many others. Vaccinating your dog or cat against rabies can help protect you and your community from rabies.

Interactions with Animals

Your pet may have contact with other animals. If so, then be aware of what diseases or **parasites** may be transmitted when animals have direct contact with each other or share the same living spaces. For example, fleas can spread to animals that share the same environment. **Infectious diseases** are caused by invading viruses or bacteria. An infectious disease that is easily spread from one animal to another by close contact is called a **contagious disease**.



Many animals use a social ranking system called a **hierarchy**, or **pecking order**. For example, when you have multiple dogs, they may compete for the position of leader of their pack. Sometimes, the competition between animals leads to aggression and fighting. Animals may also compete for resources like food, toys, or their owner's attention. Some animals are **territorial**, meaning they may fight to protect space they claim as their own. It is common for male cats to fight over territory.

Some pets are **predator** species. Predators may instinctively want to hunt other animals. Other pets are **prey** species. Prey animals may be at risk for injury from interactions with predators. Be aware of the potential for animal-to-animal interactions and how your pet and other animals in society can be affected by them.

Invasive species are animals that have moved into a new environment. Often, the result is that the invasive species harms native species directly as a predator or indirectly by competing for resources. **Feral** cats are domestic cats that live like wild animals. They may be predators of many wildlife species.

Interactions with the Environment

Your pet's environment is where it lives and carries out its daily activities. Animal activities can be detrimental to the environment both inside and outside your home. In your home, pets can damage furniture or belongings by chewing, scratching, or digging.

For example, cats use their claws on surfaces to mark their territory, condition their claws, and stretch. You probably don't want them to scratch the walls or furniture. Dogs may chew items other than their toys, like your shoes, or they may have bathroom accidents on your carpet.

Outdoors, pets can cause damage to grass, shrubs, and trees, such as those near your dog's kennel. Horses may overgraze their pasture or lot. **Feces** from your pet may be unsightly, smell bad, or pollute water sources.

Unwanted Pets

Pets are not disposable. Even so, many pets, especially dogs and cats, are **euthanized** because they have no one to care for them. Without actions to control the number of animals, some animals may become so numerous that they cause problems for people, themselves, other animals, or the environment.

Sometimes the number of uncared-for animals exceeds the available space, food, and water, leading to starvation and an increased risk of disease. Sometimes overpopulation of one animal leads to another animal's population suffering habitat loss or being hunted and killed by other animals. Many communities spend considerable time and money to control the number of unwanted pets.



On the Wild Side

Wolves in the Neighborhood

The reintroduction of wolves has consequences for other animals, both wild and domestic, and people, too. Wolves prey on other animals. In the absence of predators, herds of bison, elk, and deer can become too large for the available food resources, which can lead to starvation. Wildlife managers hope the reintroduction of wolves will help balance animal populations by reestablishing the predator-prey relationship that existed many years ago.

Not everyone is happy, though. Unfortunately, wolves also kill domestic animals like livestock, so conservationists continually monitor when and where wolves kill livestock. Sometimes offending wolves are relocated or humanely destroyed to prevent ongoing losses.

Food for Thought

What's Up, Doc?

Like pets, livestock sometimes get sick and need medicines. In the United States, medicines for livestock are strictly regulated by the Food and Drug Administration. Beyond simply demonstrating that the drugs are effective for treating illness, drug companies must also demonstrate that the medicine is safe for the animal, won't select for antimicrobial-resistant germs, and won't cause dangerous residues in food for people. Livestock producers who use medicine to treat animals must take precautions that the animals or their food products, like eggs or milk, are not marketed until the medicine has been cleared from the animal. Many medicines cannot be used without an order from a veterinarian. The selection for germs that are resistant to the drugs used for therapy, called **antimicrobial resistance**, is a critical issue for human and animal health and an important reason to use drugs according to instructions.



Experience Activity 1

Have an adult moderator read the following statements to students. Designate a “yes” side of the room and a “no” side. Students answer each question by moving to one side of the room or the other. Select students to defend their position. Students may change their position throughout the discussion by moving to the other side of the room.

1. A dog bites a little girl. Should the dog be euthanized?
2. Should there be laws to regulate what kinds and how many animals people can have?
3. A boy catches a wild baby rabbit. Should he keep it as a pet?
4. Raccoons are raiding your uncle’s trash can. He lives in a city and wants to trap and relocate them outside the city limits. Do you think he should go ahead with his plan?
5. Should malnourished wild horses be cared for by society?

Experience Activity 2

What pets are allowed where you live? Are there any rules in your community or building that prohibit some animals?

Research an invasive species. How did that species get introduced to its new environment? Are there any positive effects of the species being there? Any negative effects?

REFLECT *Here's What I Know*

How do animals interact with people?

APPLY *The Next Step*

Social concerns are those topics that are worrisome to members of a community, city, country, or other social group. Why are the following societal concerns?

- Barking dogs _____

- Unwanted pets _____

- Feral cats _____

- Rabies _____

- Dog bites _____

- Rodent infestations _____

- Overpopulated deer or other wildlife _____

- Wildlife living in cities _____

Group Thought

A lost or missing pet can be a heartbreaking experience. How would you go about preventing the loss of your pet? Make a list of things you can do to keep this from happening.

A family's dog has gone missing. Design a plan of action to find the missing dog in the community where they live.

Many communities have people who work as animal control officers. What do they do? Why is this important?

GENERAL QUESTION *Relate Pets, Wildlife, and Food Animals*

Describe a social concern related to the following:

companion animals _____

wildlife _____

livestock _____

How are these issues being solved?

companion animals _____

wildlife _____

livestock _____



Chapter 5

Paws to Think about Your Future

Careers with Animals

If you enjoy animals, you might like a career working with animals. There are many different jobs working with and benefiting animals. Here are just a few of the many careers with animals you might consider:

- animal breeder
- animal researcher
- animal trainer
- farmer
- fishery biologist
- geneticist
- groomer
- kennel operator
- nutritionist
- veterinarian
- veterinary technician
- wildlife biologist

Success Indicator

Students will describe in detail the job description, educational requirements, and expected salary of at least one animal-related career.

Life Skills Practiced

Critical thinking

Decision-making

Marketing

Communication

Community service

Project Skills Practiced

Students will demonstrate an understanding of the diversity of careers that relate to animals.

Experience Activity 1

Name at least one career relating to wildlife, pets, and food livestock in each of the job clusters.

	Wildlife	Companion Animal	Food Animal
Agriculture, food, and natural resources			
Communication and information systems			
Skilled and technical science			
Health science			
Human services and education			
Business, marketing, and management			

Experience Activity 2

Match the career with its description.

- | | |
|---|---------------------------|
| 1. ___ Provides healthcare for animals | a. animal scientist |
| 2. ___ Assists veterinarians | b. groomer |
| 3. ___ Maintains a healthy and attractive animal appearance | c. rancher |
| 4. ___ Specializes in rescuing and caring for animals from the wild | d. marine biologist |
| 5. ___ Observes and researches marine life | e. kennel operator |
| 6. ___ Studies animal behavior, growth, or performance | f. veterinary technician |
| 7. ___ Raises livestock | g. wildlife rehabilitator |
| 8. ___ Manages a facility to house dogs | h. veterinarian |

Experience Activity 3

Research three careers with animals and give the job description, educational requirements, and salary range for each.

1. _____

2. _____

3. _____

REFLECT *Here's What I Know*

What animal-related career seems intriguing to you? Why?

Why do you think many people enjoy animal-related careers?

APPLY *The Next Step*

What subjects or classes in high school are important to prepare you for the careers you are interested in?

Who can you talk to for more information about high school classes that are necessary for these careers?

Who can you talk to in that career field today? Think about shadowing or asking questions that might influence your high school classes.

GENERAL QUESTION *Relate Pets, Wildlife, and Food Animals*

Discuss the following with your facilitator:

Which career(s) do you see yourself pursuing upon high school or college graduation?

What will you do next in school? Which classes do you need to enroll in?

What after-school activity, job, or shadowing activity would be beneficial?

What do you see yourself doing differently as a result of having gone through this process?

Chapter 6

Show What You Know

Final Project

Interview or shadow someone who works with animals. Create a poster presentation, oral presentation, video, or skit including topics such as:

- What you learned about the animals and how people cared for them.
- The needs of the animals.
- The costs associated with raising and caring for the animals.
- The medical care needed to keep the animals healthy or treat illnesses.
- The benefits provided by the animals.
- How the animals interact with other animals, people, or the environment.

Also include:

- How participating in this project has impacted your opinions regarding the relationship of humans and animals.
- Do you see yourself doing anything differently as a result of having completed this project? Why or why not?
- How you can share the knowledge you have gained with others. Here are some examples: county fair, science fair, community-service project, service-learning project, demonstration, presentation.

Describe your final project.

Glossary

A

amino acids	building blocks of proteins
animal products	products made from animal material, such as meat, milk, eggs, and fiber
antimicrobial (drug) resistance	the ability of a microorganism to withstand the effects of a drug that is lethal to most members of its species

C

carnivore	an animal that eats meat
complete ration	a ration that provides a mix of nutrients balanced to meet the nutrient requirements for the animal's weight and life stage
contagious disease	an infectious disease easily transmitted from one individual to another

D

domesticated	an animal species that has been tamed by people, usually for food, fiber, work, or companionship
---------------------	--

E

essential amino acids	amino acids that cannot be formed by the body and must be supplied in the diet
euthanasia (noun)	a painless, purposeful, humane death
euthanize (verb)	to put to death in a humane and painless manner

F

feces	solid waste passed from the intestines
feral	animals existing in a wild state after originally being domesticated (tame)

H

habitat	the natural place an animal lives
herbivore	an animal that eats plants
hierarchy	a system of ranking in an order
human-animal bond	the relationship between humans and animals that promotes health and well-being

I

invasive species	a species that has rapidly expanded outside of its native habitat, or a species that has become a nuisance to the area where it lives
infectious disease	disease caused by an invading microbe, such as bacteria or viruses

L

life stage	a period of time in life with commonly recognized characteristics, such as newborn, adulthood, and growth period
-------------------	--

N

nutrients	substances, such as proteins, carbohydrates, vitamins, minerals, and water, needed to live, grow, or reproduce
------------------	--

O

omnivore	an animal that eats plants and animals (meat)
-----------------	---

P

parasite	an animal or plant that lives in or on an animal (host) and receives its nourishment from its host
parasitic	disease caused by a parasite, such as protozoa or worms
pecking order	a hierarchy (ranking) of status seen among members of a group of people or animals, originally observed among hens
predator	an animal that naturally preys on others
prey	an animal hunted or killed by another for food

R

ration	the total amount of nutrients received by an animal
--------	---

T

territorial	an animal's defense of its territory (area)
-------------	---

V

vaccine	a preparation of killed, weakened, or infectious microbes, or protein pieces of the microbe, that are given to humans or animals to protect them from an infectious disease
---------	---

Z

zoonotic disease	a disease shared between animals and humans
------------------	---



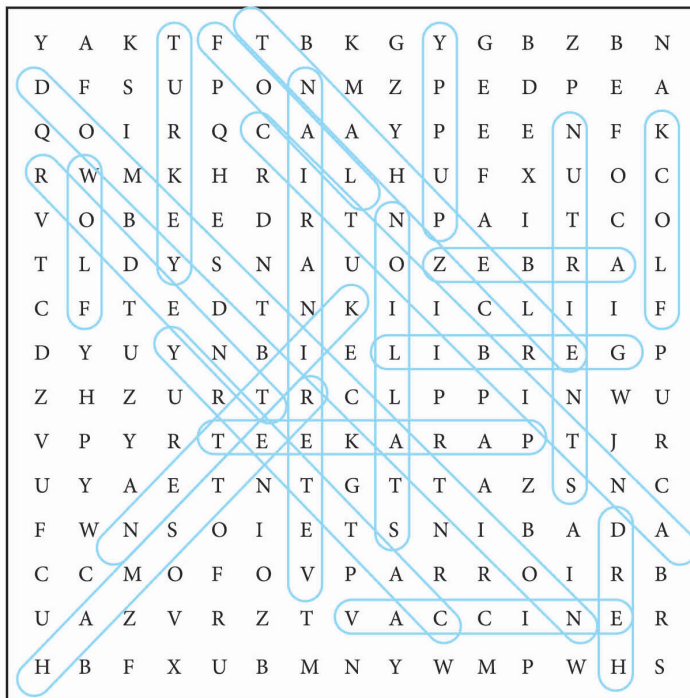
Answers

Chapter 1

Experience Activity 1

1. d; 2. e; 3. h; 4. c; 5. g; 6. b; 7. f; 8. i; 9. a; 10. j

Experience Activity 2



Chapter 2

Experience Activity 1

1. e; 2. d; 3. b; 4. b; 5. c; 6. f; 7. b; 8. a

Chapter 3

Experience Activity 1

According to the table, the puppy should eat 2–3 cups of food per day. Also, according to the chart, the puppy can have food free choice (all it wants) each day until it is 8 weeks old. Then, modify the amount of dog food according to the body condition.

A mature, active, 25-pound dog should be fed 2–2½ cups of food per day; this amount of feed should be adjusted according to the dog's body condition.

According to the chart, an old, inactive dog should receive ¾–1 cup of food. As the dog gets older, the amount of food will probably be less, but the amount to feed should still be based on body condition.

If the dog eats approximately 1½ cups per day, it will consume about 608 cups of food in 1 year. If each bag of food contains 80 cups, divide 608 by 80 to get 7.6 bags of food in 1 year. At \$16 per bag, the total cost for 1 year of dog food is about \$122. An acceptable cost estimate is \$100–\$150.

Growth requires more energy than what is required to maintain weight.

Body condition is a measure of the amount of body fat between the skin and bones. Monitoring body condition is important because low and high body condition both have been associated with health problems.

Chapter 5

Experience Activity 2

1. h; 2. f; 3. b; 4. g; 5. d; 6. a; 7. c; 8. e

Resources

Websites

American Animal Hospital Association Guidelines for Pet Owners

<https://www.aaha.org/your-pet/pet-owner-education/aaha-guidelines-for-pet-owners/>

American Veterinary Medical Association <http://www.avma.org/>

USDA Animal Health Information <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth>

USDA Wildlife Management <https://www.usda.gov/topics/conservation/wildlife>

Centers for Disease Control and Prevention, Healthy Pets, Healthy People <https://www.cdc.gov/healthypets/index.html>

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USDA. (2019). *Dog breeder resource guide*. USDA Animal Care.

https://www.aphis.usda.gov/animal_welfare/downloads/breeders/dogs/Dog-Breeder-Resource-Guide.pdf

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