



## R A B B I T S : From the Animal's Point of View ④



# Rabbit Disease: What You Need to Know

### Subject Overview and Background Information

**F**rom a health standpoint, the goal in owning and caring for a rabbit is to maintain the animal at a high level of physical and emotional wellness. Factors relating to this include proper diet, exercise, and stress levels, limited exposure to illness, and provision of uncontaminated water and food and appropriate housing. Common illnesses or health conditions found in rabbits include rabbit snuffles (runny nose, “wet” eyes), ear infections (infected rabbits tend to tilt their head), abscesses (lumps on their body), obesity, and sore hocks (loss of fur at ankles; red, irritated skin).

Even though there are many health conditions and illnesses that can affect rabbits, **prevention** is the single most important course of action, and begins with providing

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your rabbit with appropriate housing and proper nutrition. Appropriate housing means that your rabbit has a food bowl, water dispenser, bedding, toys, and a litter box, but the size of the cage and its construction are important, too. A general rule to follow is that “bigger is better”: the cage needs to be at least four times as big as the rabbit. Cages with wire floors are not recommended unless there is also an additional smooth surface for the rabbit to walk or stand upon. Wire floors tend to be uncomfortable for rabbits, can cause sores on their feet, and can interfere with coprophagy if cecotropes fall through the wire. Furthermore, the condition of a rabbit's home is important. It must be kept clean (a dirty environment invites disease-causing organisms to breed and contaminates the animal's food and water), the temperature needs to be regulated (avoid extremes; rabbits are susceptible to heatstroke and frostbite!), and stress factors (e.g., loud noises) must be kept to a minimum.

As is the case for humans, a nutritious diet helps maintain a rabbit's overall health. Rabbits are herbivores and consume mainly plant matter. This means that, in order to receive all of the nutrients they require for a balanced diet, they must consume a variety of different types of plant matter. Although commercial rabbit pellets are available and do include the nutrients that rabbits need, a general rule to follow in helping maintain a healthy diet for your rabbit

is that *fresh is better* (especially for adult rabbits). A rabbit's unique digestive system requires foods that are high in fiber (e.g., fresh plant matter).

Although rabbits can experience many different health problems and diseases, youth can take an active role in preventing them. One of the most important means of accomplishing this is to establish a daily health care monitoring routine whereby the youth keep a record of their rabbit's physical, emotional, and behavioral characteristics. Health-check indicators that youth can observe include the quality of the feces, the type, degree, and quality of the rabbit's activity level, the appearance of the rabbit's coat, the rabbit's appetite, and the appearance of the rabbit's teeth and gums. If anything looks atypical, consult a veterinarian as soon as possible.

### • Concepts and Vocabulary

Direct contact, disease, disease transmission, germs, health care monitoring, illness, indirect contact, preventive health care, prevention of disease

### • Life Skills

Communication, contributions to group effort, cooperation, critical thinking, decision making, disease prevention, keeping records, problem solving, sharing, teamwork

### • Subject Links

Science, Language Arts

### • Overview of Activities

This section begins with the first activity, “*How Fast Can Germs Spread?*” In this activity, youth will be exposed to the concept of disease transmission. By inadvertently spreading glitter from one person to another in a short period of time, youth can see a simple illustration of how germs can be transferred and diseases disseminated! Additionally, this activity stresses the importance of practicing good hygiene. When the youth wash their hands, they see that they can remove the “germs” (glitter).



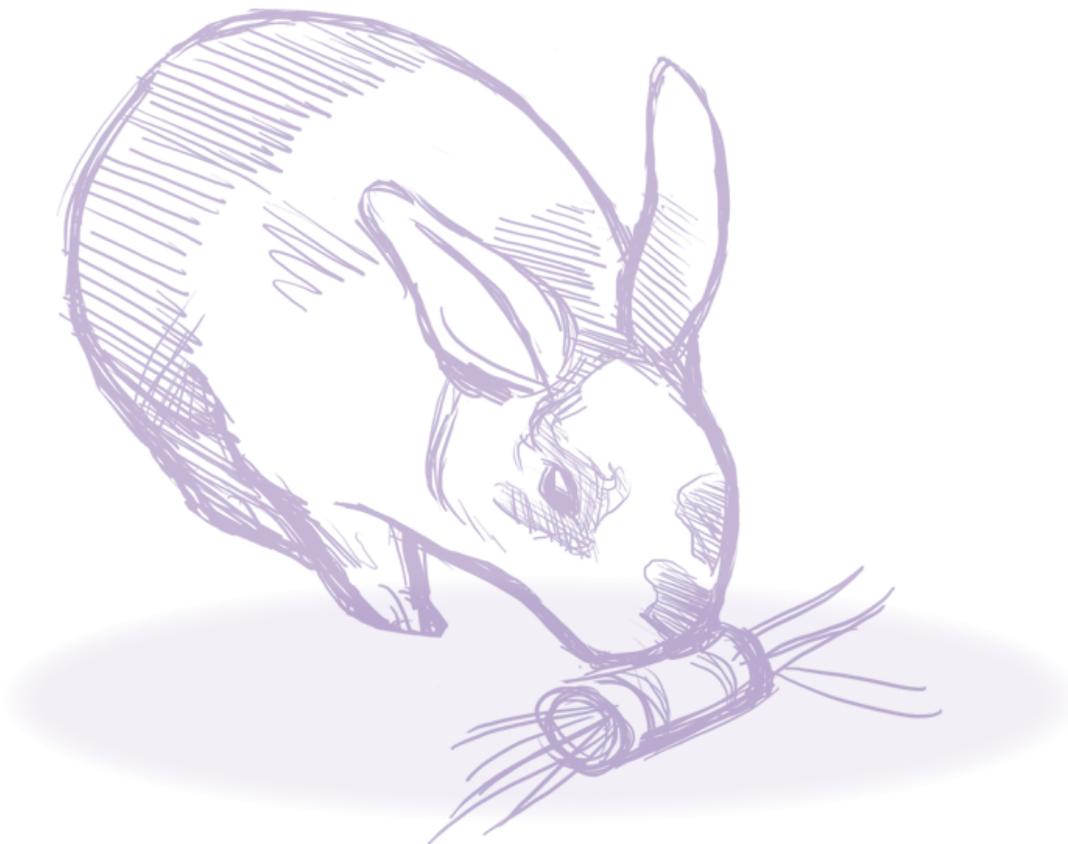
In the second activity, “*Is My Rabbit Sick?*,” youth will have an opportunity to determine which illness their “rabbit” has. Youth will be given a list of observed symptoms and then challenged to identify the exact health problem their rabbit may be experiencing. By providing similar symptoms for two different health problems, the volunteer may be able to demonstrate to the youth that they cannot always positively determine the exact illness on their own, and so demonstrate the importance of professional veterinary care. Disease symptoms can be ambiguous, and it is important that youth know to consult a professional to find out what might be affecting their animal’s health.

In the third activity, “*My Rabbit’s Health*,” youth are separated into small groups. Each group is given five daily journal entries related to a particular rabbit and they are asked to observe and record important health facts. After

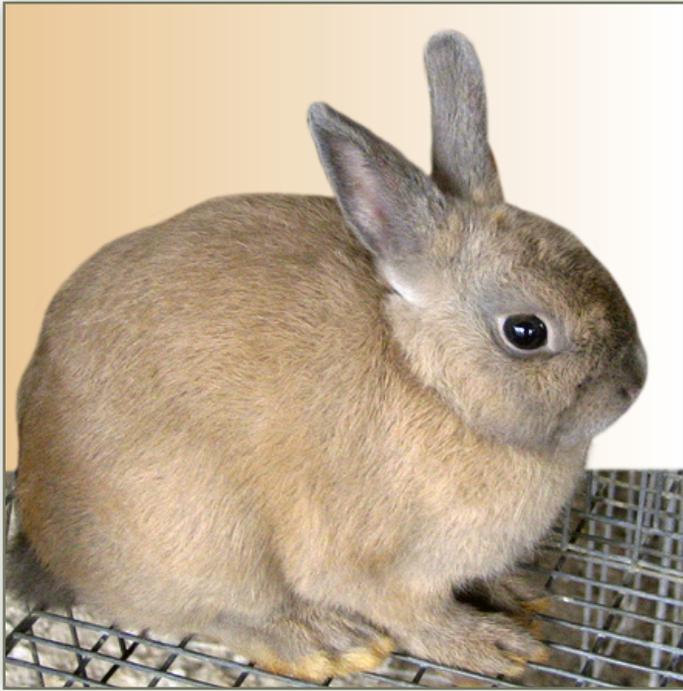
reviewing all five journal entries, they will be given a list of rabbit disease descriptions. Based on their notes, each group will come up with a suggested diagnosis for their rabbit, along with their reasons for reaching this conclusion.

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# Facts About Rabbits



## DISEASE

### • Basic Facts

- Rabbits are very sensitive animals and can become sick very quickly. For this reason it is important to seek veterinary care immediately if anything seems out of the ordinary with your rabbit.
- It is important to observe and check your rabbit daily. By becoming more familiar with your rabbit and its behavior, you will make it easier to tell if something is wrong.
- Common signs of problems may include failure to eat or drink, diarrhea or loose stools, discharge from the nose or eyes, lethargy (tiredness), decrease in droppings or imbedded hair in droppings, or any abnormal behavior.
- Many health problems that occur with rabbits are due to poor diet, lack of cleanliness, or improper handling that may result in injuries to the rabbit.
- A rabbit should be able to live a long and happy life if it has good veterinary care, good husbandry, a clean environment, and a healthy diet.

### • Handling and Restraint

- Rabbits are very delicate creatures so it is very important that you know how to handle a rabbit in a way that does not cause any harm or injuries. Improper handling can result in life-threatening injuries to a rabbit.
- A rabbit's spine is extremely fragile. Back injuries most often occur when rabbits are dropped or improperly picked up or restrained. When a rabbit becomes frightened, it will struggle violently, using its strong back legs to try to break free. Holding a rabbit improperly while the rabbit tries to free itself can cause the rabbit to overextend the lower back region of its spine, leading to fractures and dislocations. Because of this, when handling a rabbit, you should never try to overpower it.
- Signs of back injury may include lack of coordination, uncontrolled urine-soiling and defecation, or in the most serious cases, paralysis of the rear legs. Any rabbit exhibiting any of these signs should be examined by a veterinarian at once.
- Speaking softly while approaching a rabbit can help keep it calm when you know you will need to restrain it.
- Covering the rabbit's eyes and lightly stroking its body will often cause the rabbit to enter a trance-like state. A rabbit in this condition will be more relaxed and less prone to panic and injury.
- Rabbits' ears have a very complex system of blood vessels that are involved in heat regulation and sound gathering. A rabbit should NEVER be picked up by its ears, nor should its ears be held as a means of restraint. Also, never hold a rabbit by its limbs or tail.
- It is important to know how to properly handle and restrain a rabbit. However, as an owner you should know your rabbit's own personality. Some rabbits do not like to be picked up. Practice picking your rabbit up and setting it down to build your confidence get the rabbit used to being picked up. By rewarding a rabbit after it is picked up, you can help decrease its fear of being picked up.

- When holding a rabbit, hold it close to you. Rabbits are unpredictable; they may kick or struggle at any moment, so be prepared! If you have a secure grasp of your rabbit and it begins to struggle, hug it gently to your body. This will protect both you and the rabbit. If you don't have a good grasp, get close to the ground (since jumping from an unsafe height could hurt the rabbit) and let the rabbit go safely on the ground.
- Important tips on picking up and carrying a rabbit include:
  - » *Approach your rabbit slowly and quietly to avoid startling it.*
  - » *Grip the loose skin over your rabbit's shoulder firmly but gently with one hand, and place the other hand under the rabbit's rump as you lift it. This will help support its weight.*
  - » *Hold your rabbit upright and carry it in front of you and close to your body.*

## • Housing Considerations

- The availability of clean, well-managed housing for rabbits will help minimize the potential for disease and make the rabbit more comfortable.
- Rabbits can be housed either indoors or outdoors.
- **Indoors:** Indoor rabbits should be confined to an enclosure such as a wire cage that provides enough room for the rabbit to move around. The floor should be partly covered with Plexiglas or washable towels. This will help give rabbit's paws relief from constant contact with the wire floor and help prevent diseases such as sore hocks.
  - » *A water bottle or ceramic water bowl, food dish, and litter box should be within the enclosure.*
  - » *Owners should make sure that their rabbit is not let out of its enclosure. Rabbits love to chew, and they can damage household items. They can also injure themselves if they bite telephone or electrical cords.*
- **Outdoors:** Rabbits kept outdoors should have a roomy wire cage with Plexiglas covering part of the floor. A water bottle or ceramic water bowl and a food dish should be provided.
  - » *Adequate cover should be provided for outdoor rabbits to prevent heat stress or heat stroke in hot weather or exposure in cold weather.*

» *A hiding spot should also be provided for outdoor rabbits so they have a place to retreat when they feel threatened.*

## • Common Diseases

- **Snuffles:** This disease is one of the most common illnesses in rabbits. Also called Pasteurellosis, it is caused by bacteria that are transmitted from doe to litter or between breeding rabbits. The most common problem caused by snuffles is a respiratory condition, although the nose, eyes, and other areas of the body can also be affected. This disease can become chronic or lead to death if untreated or improperly treated. Pasteurellosis can be a problem in rabbitries (places where rabbits are raised or kept), so it is important that any owner who obtains a rabbit from a rabbitry have it examined by a veterinarian promptly after purchase.
- **Cold:** Like a human cold, a cold in rabbits is a general term used to describe such symptoms as runny nose, runny eyes, and sneezing. Unlike a human cold, however, rabbit colds are caused by bacteria rather than viruses, so they can be treated with antibiotics. Veterinary care is recommended for a rabbit with a cold because some bacterial infections may lead to a much more serious respiratory illness, **rabbit pneumonia**, which in turn can lead to death.
- **Internal bacterial infections:** A variety of different bacteria can cause internal infections in rabbits. Affected rabbits may show a wide variety of signs because multiple organs (liver, kidney, intestinal tract, brain, etc.) may be involved. Symptoms of internal bacterial infection include (but are not limited to) sneezing, coughing, and changes in behavior and appetite. Bacterial infections can also affect the ears, causing ear infections that can lead to a condition called torticollis or **wryneck** (twisting of the neck), head shaking, head scratching, or loss of balance. If you suspect that your rabbit may be ill due to an internal bacterial infection, promptly consult with your veterinarian.
- **Ringworm:** Ringworm is a fungal condition that is transmitted easily through contact with an infected rabbit's coat or living quarters. It usually causes multiple hairless areas with slightly reddened skin

around the head, ears, and forelimbs. These hairless areas are often covered with a slight or sometimes heavy crust. Ringworm can be transmitted to people, so it is extremely important that you consult your veterinarian regarding proper treatment and handling of a rabbit with this condition. In addition, spores from the ringworm fungus can live in an animal's environment for more than 18 months, so anything that an infected rabbit has come into contact with should be properly disinfected.

- **Ear mite infestation (ear canker, ear mange):** Ear mites are external parasites that cause a buildup of a brown crusty material near the rabbit's ear canal. The area usually becomes very raw and irritated. In severe cases, sores may spread to other areas of the rabbit's head.
- ***Cheyletiella mangle* ("walking dandruff"):** This parasitic infestation of the skin, also caused by mites, often goes unnoticed by owners, especially during its early stages. If the condition worsens, however, there will be an accumulation of what looks like dandruff within the rabbit's fur and the animal may lose clumps of hair. On close inspection of an infested rabbit, the owner might notice movement of the "dandruff" on the skin. This movement is caused by the mites as they move around under the dandruff scales on the skin. Rabbits that are infested may or may not exhibit increased scratching. Transmission can be from either direct contact with an infested rabbit (actual physical contact) or from indirect contact (contact with things the infested rabbit has touched).
- **Flea infestation:** Fleas are external parasites that can infest pet rabbits. You can use a flea comb to reveal the presence of the parasites or their waste products (tiny clumps of dried blood known as *flea dirt*). Fleas feed on blood and can cause anemia if present in large numbers. Over-the-counter flea control treatments and special soaps are available to treat a flea infestation; however, it is recommended that you first consult a veterinarian.

- **Coccidiosis:** Coccidiosis is a parasitic illness caused by a *protozoan* (a one-celled organism) that affects the rabbit's liver or intestines. Rabbits can become infected if they consume food or water that is contaminated with feces from an infected rabbit. If coccidiosis infects the liver, the rabbit may exhibit a loss of appetite, diarrhea, and even death. If located in the intestines, symptoms include weight loss, soft or watery feces, mucus or blood in feces, a soiled anal area, dehydration, increased thirst, and possibly death. Occasionally, this parasite may also infect the nasal passages and cause a respiratory disease called **nasal coccidiosis**.

### • Common Non-Infectious Conditions

- **Abscesses:** An abscess is a collection of pus that may form at the site of a bacterial or parasitic infection. In rabbits, abscesses often form at the site of a wound that has gone untreated. Abscesses should be treated by a veterinarian.
- **Hairballs:** Rabbits groom themselves by licking their fur and they will swallow hair in the process. As a result, they can develop hairballs in their stomach. Unfortunately, a rabbit cannot cough up a hairball, so it will remain in the stomach and can grow to a significant size. Initial signs of a hairball problem include a rabbit's unwillingness to eat pellets and preference to eat more greens and treats. Later signs include a loss of appetite, smaller fecal pellets or no fecal pellets passing, weakness, weight loss, and eventually death from starvation. Surgery is often necessary to remove hairballs. To help prevent hairballs, brush your rabbit's fur daily. In some cases you may also need to use intestinal lubricants (ask your veterinarian about these).
- **Sore hocks:** Sore hocks are infected wounds that develop on the bottom of a rabbit's feet. Sore hocks can be caused by frequent thumping of the rear feet when frightened, excessive body weight, lack of movement, pressure or abrasions from improper cage flooring, or chronic contact with soiled bedding. Seek veterinary advice if you observe wounds on the bottom of your rabbit's feet or if your rabbit has difficulty standing still

on the wire floor of its cage. You can help prevent sore hocks by providing a smooth surface for your rabbit to stand on in its cage and keeping its cage clean and dry.

- **Malocclusion (wolf or buck teeth; dental disease):** Malocclusion is the improper alignment of a rabbit's teeth brought on by abnormal tooth growth and wear. It usually results in overgrown teeth, particularly the incisors. Rabbits' teeth grow continuously, and it is very important that they eat hard foods in order to maintain a perfect bite. Signs of malocclusion include a rabbit's failure to chew or swallow food properly and heavy salivation. Malocclusion will prevent the rabbit from eating because the teeth will grow so long that they lose the ability to chew.
- **Overgrown claws:** Overgrown claws can hurt both a rabbit and its owner. They can easily become caught in objects such as cage flooring or your clothing, causing pain to the rabbit, or a panicked rabbit can scratch and injure itself. It is important to have a rabbit's claws clipped by someone who is very knowledgeable. Declawing of rabbits is NOT recommended.
- **Heat stress (heat stroke):** Rabbits can get heat stroke if they are in an environment above 85°F or if they are exposed to a combination of high heat and high humidity. Rabbits can also experience heat stroke if there is inadequate shade or ventilation. Housing many rabbits together can also contribute to heat stress. Signs of heat stroke include excessive panting and salivation, ears turning red, weakness, and refusal to move. Heat stroke can cause death. However, you can successfully treat it if you recognize it early. Adequate shade from the sun, proper ventilation, and an abundance of cool, fresh water can help prevent heat stroke.

- **Muroid enteritis:** This is a type of diarrhea that is influenced by nutrition. Signs include dehydration, bloating of the abdomen, and a jelly-like secretion in the feces. Rabbits with severe enteritis produce a sloshing noise in the stomach when shaken. Stress and overcrowded areas play a major part in triggering outbreaks. To help prevent this condition, provide a feed that is high in fiber and low in protein along with regular feedings of long-stem hay. Discuss rations with your veterinarian.

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## ACTIVITY 1



# How Fast Can Germs Spread?

## Background Information

**Germs** are tiny organisms that can cause disease. They are generally spread by **direct contact** with an infected animal (i.e., touching the animal) or **indirect contact** with an object (e.g., food dish, water bottle or bowl) that an infected animal has used. Most germs are spread through the air via sneezes or coughs, but they can also be spread through sweat, saliva, and blood. However, germs are everywhere. Germs that infect humans can adhere to objects (e.g., doorknobs, money) and body parts (e.g., hands), and can be spread when an uninfected person touches something that is contaminated (e.g., shaking hands). This is why good sanitation (in this case, hand washing) is important in the prevention of disease.

### • Time Required

25 to 40 minutes

### • Concepts and Vocabulary

**Direct contact.** The transmission of a disease from one animal to another through physical contact (e.g., touching).

**Disease transmission.** The transfer of disease-causing agents (pathogens) from one organism to another through direct contact or indirect contact.

**Germ.** A microorganism that has the potential to cause illness or diseases.

**Indirect contact.** The transmission of a disease from one animal to another by coming into contact with an object (e.g., water trough, feeders) that was contaminated by a diseased animal or when germs are spread through the air.

**Preventive health care.** Methods that include observations, vaccinations, examinations, and screening tests that help to prevent disease and prolong life.

### • Life Skills

Communication, cooperation, disease prevention, problem solving, sharing

### • Subject Links

Language Arts

### • State Content Standards

#### Language Arts

- Third Grade:
  - » *Speaking Applications – 2.3*
- Fourth Grade:
  - » *Listening and Speaking Strategies – 1.7, 1.8*
- Fifth Grade:
  - » *Listening and Speaking Strategies – 1.5*
- Sixth Grade:
  - » *Listening and Speaking Strategies – 1.5*
  - » *Speaking Applications – 2.5a, 2.5b*

### • Materials Needed

(\* = Materials provided with curriculum)

- Glitter (3 to 4 different colors are recommended)
- \**Rabbit Cards*
- Flip chart paper and writing implements.

### • Getting Ready

- Prepare enough *Rabbit Cards* so the volunteer and each youth participant receives one card.
- Put one color of glitter in different places in the room on the floor.

- Put another color of glitter on a few of the chairs where the youth will be sitting.
  - » **Volunteer ONLY:** *Put a third color of glitter on your right hand without letting anyone notice. Do this only after you have passed the rabbit cards out to the youth.*

## Opening Questions

1. **What are some ways you can tell if you are sick?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
2. **What are some ways you might be able to tell if a rabbit is sick?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
3. **What do you know about different ways you can get sick? What do you know about different ways a rabbit might get sick?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
4. **What are some ways that you think diseases can be spread from one human to another? From one rabbit to another?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.

## Procedure (Experiencing)

1. Provide each youth with a *Rabbit Card*.
  - » **Volunteer tip:** *Discuss these rules for this game with the youth:  
Have everyone pretend to be the rabbit on the rabbit card they have. The volunteer and the youth move around the room shaking hands with other “rabbits” and introducing themselves by name and breed and sharing the fun facts about themselves that they find on their rabbit cards. The goal of the game is to shake hands with several other “rabbits,” but not all of them. Additionally, youth should learn the names of a few other rabbit breeds and something interesting about them.*

2. The “Volunteer Rabbit” will start the game by introducing himself or herself to one “youth rabbit,” and proceed from there.

## Sharing, Processing, and Generalizing

Follow the lines of thinking developed by the youth as they share and compare their thoughts and observations; if necessary, use more targeted questions as prompts to get to particular points. Specific questions might include

1. **What did you learn about different breeds of rabbit?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
2. **What do you know about disease or illness prevention?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
3. **Please look at your hands. What do you notice about them? Please explain.** Have them try to associate the glitter with germs. Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
4. **Please look at your feet and clothes. What do you notice about them? Please explain.** Have them try to associate the glitter with germs. Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
5. **Have them share what happened during the activity. What did you learn about spreading germs? Where did the “germs” come from? Does anyone know how they got the “germs”?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.

6. **How do you think this might relate to getting sick or staying well? What did you learn about becoming sick?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
7. At the end of discussion, have the youth wash their hands with soap to get rid of the “germs.”

## Concept and Term Introduction

At this point, volunteers need to ensure that the concepts and terms **direct contact, disease prevention, disease transmission, germs, indirect contact, and prevention of disease** have been introduced. (**Note:** The goal is to have the youth develop these concepts through their own exploration and define the terms using their own words.)

## Concept Application

- Ask youth to think of things they could do at home (e.g., washing their hands, wiping down counter tops, cleaning door handles) that would help reduce the risk of contracting and spreading diseases.
- Ask youth to consider ways to reduce the risk of their animal (4-H project animal or pet) from contracting and spreading diseases (e.g., clean food and water bowls).

## References

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## Rabbit Cards

Print one-sided and cut out along dashed lines.

**Name:** Fuzz

**Breed:** American Fuzzy Lop

**Facts:** Also known as Fuzzy Lop, Fuzzy or AFL, they have a long coat so they need to be groomed at least once a week as adults.



**Name:** Donald

**Breed:** Belgian Hare

**Facts:** They attract a lot of attention because of their unique build and attractive chestnut color.



**Name:** Katie

**Breed:** Beveren

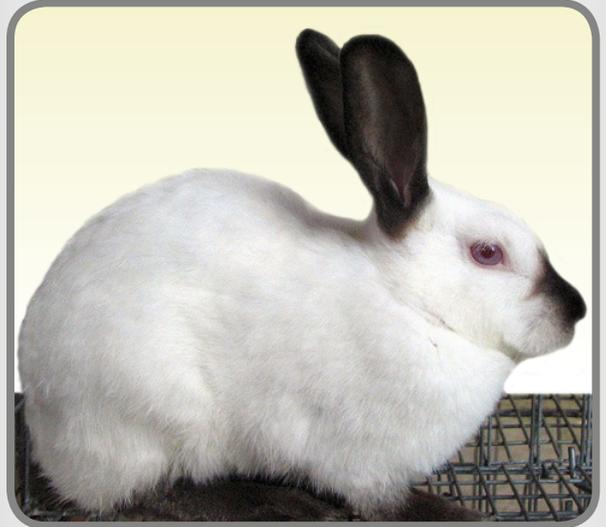
**Facts:** This breed was originated in Beveren, Belgium. Some colors include black, blue, and blue-eyed white.



**Name:** Mary

**Breed:** Californian

**Facts:** The color of this breed is all white with black, chocolate, blue, or lilac nose, ears, feet, and tail.



Print one-sided and cut out along dashed lines.

**Name:** Ronald

**Breed:** Checkered Giant

**Facts:** The Checkered Giant is considered a show rabbit rather than a meat rabbit.



**Name:** Erik

**Breed:** Crème d'Argent

**Facts:** The color of the coat is orange and the top color is creamy white interspersed with long, orange hairs.



**Name:** Dan

**Breed:** Dutch

**Facts:** Originated in Holland and is one of the oldest breeds, first recorded in the fifteenth century.



**Name:** Annie

**Breed:** Dwarf Hotot

**Facts:** Like the Hotot, the Dwarf Hotot is short and compact with erect, slightly rounded ears.



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**Name:** Jenny

**Breed:** English Lop

**Facts:** The English Lop is the most popular lop. There is a limited variety of colors, with the most popular being sooty fawn. Others are black, fawn, and marked varieties of these colors.



**Name:** Jeff

**Breed:** English Spot

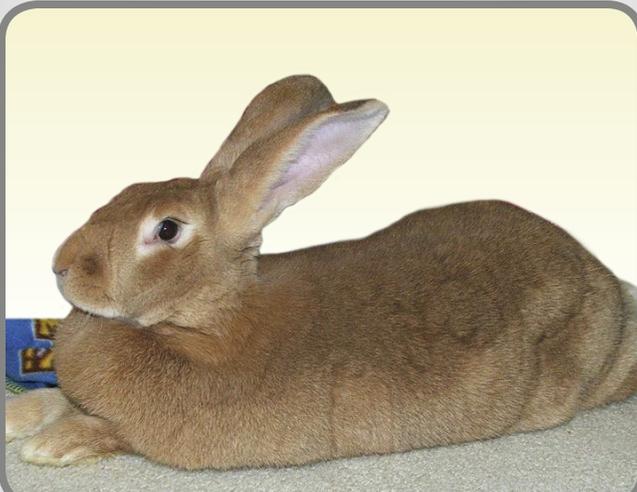
**Facts:** English Spots have been bred in England since the 1880s. This breed is mostly white, with coloring on the nose, ears, and around the eyes, and chains of colored spots along its sides.



**Name:** Happy

**Breed:** Flemish Giant

**Facts:** The original Flemish Giant was about 14 lb and of a dirty iron grey color, with sandy or white bars on the legs and long ears with bent tips.



**Name:** Pearl

**Breed:** Florida White

**Facts:** This breed was originally created in Florida in the 1960s as a small meat rabbit and white laboratory rabbit.



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**Name:** Larry

**Breed:** Giant Angora

**Facts:** The Giant Angora is larger than other varieties of Angora, having been created to be an efficient wool rabbit on economical feed and housing. They are known for being very gentle.



**Name:** Floppy

**Breed:** Harlequin

**Facts:** The name Harlequin refers to the color pattern of this breed of rabbit. The ideal Harlequin has two colors on the face and ears, one on each side. The Japanese Harlequin has orange on one side of the face and black, blue, chocolate, or lilac on the other side; the Magpie Harlequin has white on one side of the face with black, blue, chocolate, or lilac on the opposite side.



**Name:** Havana

**Breed:** Havana

**Facts:** This breed has a rich chocolate brown pelt and rich, ruby-eyed glow of the eye. Although the eyes should be the same color as the body, they appear ruby red in a darkened room.



**Name:** Jay

**Breed:** Himalayan

**Facts:** The Himalayan has a long, narrow body and a short, white coat with chocolate, black, blue, or lilac points.



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**Name:** George

**Breed:** Holland Lop

**Facts:** The Holland Lop is heavily muscled, short coupled, compact, and well balanced in length, width, and depth. The head appears very big for the body, sitting high on the shoulders and close to the shoulders, showing no neck.



**Name:** Becky

**Breed:** Blanc de Hotot

**Facts:** This breed came from Hotot-en-Auge, Normandy. Madam E. Bernhard, the rabbit breeder, created this breed because she wanted a white rabbit with black eyes for many uses: meat, fur, and show. It was a very long and hard process to develop this breed.



**Name:** Jack

**Breed:** Jersey Woolly

**Facts:** The Jersey Woolly is also known as the Dwarf Angora. It has a short, compact body, weighs about 3 lb, has a squarish head, and has easy-care wool fur on its body.



**Name:** Lilac

**Breed:** Lilac

**Facts:** Lilac has dense, silky fur, evenly colored throughout in a pinkish dove shade.



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**Name:** Jerry

**Breed:** Mini Lop

**Facts:** The main characteristics of this type of rabbit are its robust body, blocky head, floppy ears, and long, thick hair.



**Name:** Arnold

**Breed:** Mini Rex

**Facts:** The main feature of this rabbit is its very beautiful, very soft fur. It feels just like velvet. It is sometime called the “velveteen” rabbit.



**Name:** Baby

**Breed:** Netherland Dwarf

**Facts:** This breed is known for its bad temper, especially among bucks, the adult dwarf doe is very passive and makes for a wonderful pet.



**Name:** Charlie

**Breed:** New Zealand

**Facts:** Coat colors include white, red, and black. However, white is the most common color and was first bred in the United States for commercial purposes.



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**Name:** Midnight

**Breed:** Polish

**Facts:** Polish rabbits were the original dwarf rabbit. The red-eyed white is the most common type. It is a common exhibition breed.



**Name:** Spot

**Breed:** Rhinelander

**Facts:** The Rhinelander is a German breed that is a common meat rabbit. Rhinelanders are characterized by their soft, silky coat with tri-color markings and a face marking of black and yellow in butterfly pattern.



**Name:** Savannah

**Breed:** Satin Angora

**Facts:** The Satin Angora has no wool growing on its face, ears, or feet. It is also easy to groom compared to the English Angora.



**Name:** Martin

**Breed:** Silver Marten

**Facts:** The Silver Marten rabbits were developed in the United States from the Chinchilla rabbit. Chinchilla rabbit breeders were reporting "strange little black rabbits" in their litters. These little black rabbits were bred and eventually developed into the Silver Martens that we see today.



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**Name:** Allison

**Breed:** American Sable

**Facts:** The American Sable is unique for its coat color. It has a red glow in its eyes, its fur is soft, and its body is round.



**Name:** Brittan

**Breed:** Britannia Petite

**Facts:** Britannia Petites are easily stressed. They are very curious animals and need toys and human interaction to keep them from getting bored.



## ACTIVITY 2



# Is My Rabbit Sick?

### Background Information

Often when a rabbit is sick, it will exhibit few obvious signs or symptoms. Although this seems to be an advantage for wild rabbits (since it makes it harder for a predator to identify the weaker animal in a group), it is a disadvantage for domesticated rabbits because it is difficult for a caretaker to detect potential health problems. However, through close observation, you may be able to notice slight changes in your rabbit's behavior or appearance that may indicate the need for veterinary care. These changes might include (1) your animal hiding in an unusual place in its cage or in your home; (2) a change in your rabbit's posture (e.g., hunched position); or (3) your rabbit's refusal of a favorite treat. Be alert for signs like this that might indicate a potential problem!

If or when a health problem arises with your rabbit, you need to make a thorough evaluation of its environment (e.g., housing), its diet, and its history (e.g., age, medical records). Because the origin of a disease is not always easy to identify, the more information you can provide your veterinarian, the better. By doing this, you will help ensure that your rabbit receives the proper treatment and has the best chance for a full recovery.

### • Time Required

40 to 60 minutes

### • Concepts and Vocabulary

**Preventive health care.** Methods that include observations, vaccinations, examinations, and screening tests that help to prevent disease and prolong life.

### • Life Skills

Critical thinking, decision making, disease prevention, keeping records, problem solving, sharing

### • Subject Links

Language Arts

### • State Content Standards

#### Language Arts

- Fourth Grade:
  - » *Listening and Speaking Strategies – 1.7, 1.8*
- Fifth Grade:
  - » *Listening and Speaking Strategies – 1.5*
- Sixth Grade:
  - » *Listening and Speaking Strategies – 1.5*
  - » *Speaking Applications – 2.5a, 2.5b*

### • Suggested Grouping

Individuals or pairs

### • Materials Needed

(\* = Materials provided with curriculum)

- Seven tables with 3 to 5 chairs each (enough chairs to accommodate the entire group; one chair per child)
- One CD or cassette player; one music CD or tape
- One die (from a pair of dice)
- \* *Rabbit Characteristic Cards*
- \* *Rabbit Illness Cards*
- \* *Veterinary Procedure Cards*
- \* *Health Care Log* (blank form)
- Three containers (e.g., large bowls; paper bags)
- Flip chart paper
- Markers
- Tape

## • Getting Ready

- Organize the tables (with chairs) around the room so the youth can move freely between them.
- Using a piece of paper and a marker, randomly assign a number (from 1 to 6) to each of the tables.
- Place the seventh table off to the side of the room (in a corner or against the wall) and label it “Veterinary Hospital.”
- Cut out the *Rabbit Characteristic Cards* and place them in one container.
- Cut out the *Rabbit Characteristic Cards* and place them in a second container.
- Cut out the *Veterinary Procedure Cards* and place them in a third container on the “Veterinary Hospital” table.

## Opening Questions

Working in small groups, ask the youth the following:

- 1. What do you think are some things that humans can do to avoid getting sick?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
- 2. How do you think some of the things listed in the previous question can also be applied to rabbits to help them remain healthy?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.

## Procedure (Experiencing)

- 1.** Have each individual or pair choose one *Rabbit Characteristic Card* randomly from the container. This represents their rabbit for this activity.

- 2.** Explain to the youth that they are going to play a modified game of “Musical Chairs,” but without removing any chairs. They are to move around the room and between the tables while the music is playing; when the music stops, they are to find a chair and sit down.
- 3.** The volunteer then rolls the die and announces the number (from 1 to 6) that has been rolled.
- 4.** The volunteer now draws one of the *Rabbit Illness Cards* out of the bowl. Explain to the youth that one of the rabbits at that numbered table has this illness and some of the others may contract the disease, depending on the rabbits’ health and environment.
- 5.** The volunteer reads the information on the *Rabbit Illness Card* that he or she has drawn. The youth at that numbered table read their *Rabbit Characteristic Cards* and determine whether their rabbits will contract the disease or not. Those youth whose rabbits contract the illness must relocate to the Veterinary Hospital table; those whose rabbits do not become ill should remain at their table and play the next round of “Musical Chairs.”
- 6.** At the Veterinary Hospital table, each youth draws one *Veterinary Procedure Card* prior to the start of the next round of “Musical Chairs.” If the card contains the appropriate information to cure the rabbit, the youth place the card back into the container and return to their numbered table to play the next round; if not, they place the card back into the container and wait to draw another *Veterinary Procedure Card* at the end of the next round.
- 7.** Continue playing the game until the volunteer has used all of the *Rabbit Illness Cards*.
- 8.** The game can be repeated if desired.

## Sharing, Processing, and Generalizing

Review all of the rabbit illnesses that have just been introduced to see what the youth have remembered and understood. Then follow the lines of thinking developed through general thoughts, observations, and questions raised by the youth; if necessary, use more targeted questions as prompts to get to particular points. Specific questions might include

1. **What did you learn about rabbit illnesses from this activity? Please explain.** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
2. **What were some common factors that caused the spread of disease?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
3. **What are some ways that one could slow diseases down or stop them from spreading?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
4. **If you had a friend who wanted to get a rabbit, what are some things you would tell him or her that would help them keep the rabbit healthy and happy?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.

## Concept and Term Discovery/Introduction

At this point, volunteers need to ensure that the **preventive health care** has been introduced or discovered by the youth. (**Note:** The goal is to have the youth discover the concepts and terms on their own. It helps if they can define terms and concepts using their own words.)

## Concept Application

- For youth who own their own rabbits, develop a health care log that includes:
  - » *Dietary monitoring (e.g., type of food, amount of food, feeding schedule).*
  - » *Observations of behavior.*
  - » *Observations of appearance.*
  - » *Veterinary updates (e.g., dates of check-ups, dates of vaccines). See sample Health Care Log provided in the materials for this activity.*
- Ask the youth to discuss their *Health Care Logs* with each other and share ideas.
- For youth who do not own rabbits, have them develop a *Health Care Log* for another household pet that they may own.

## References

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## Rabbit Characteristic Cards

*Print one-sided and cut out along dashed lines.*

**Rabbit Name:** Buster  
**Age:** Young rabbit  
**Cage:** Clean cage  
**Diet:** Proper diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Mike  
**Age:** Older rabbit  
**Cage:** Dirty cage  
**Diet:** Proper diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Alex  
**Age:** Young rabbit  
**Cage:** Clean cage  
**Diet:** Inappropriate diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Bugs  
**Age:** Older rabbit  
**Cage:** Clean cage  
**Diet:** Proper diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Wilbur  
**Age:** Young rabbit  
**Cage:** Dirty cage  
**Diet:** Inappropriate diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Matilda  
**Age:** Older rabbit  
**Cage:** Clean cage  
**Diet:** Inappropriate diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Thumper  
**Age:** Young rabbit  
**Cage:** Clean cage  
**Diet:** Inappropriate diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Annie  
**Age:** Older rabbit  
**Cage:** Dirty cage  
**Diet:** Inappropriate diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Hopper  
**Age:** Young rabbit  
**Cage:** Dirty cage  
**Diet:** Proper diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Flopsy  
**Age:** Older rabbit  
**Cage:** Clean cage  
**Diet:** Inappropriate diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Cleo  
**Age:** Young rabbit  
**Cage:** Clean cage  
**Diet:** Proper diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Springs  
**Age:** Older rabbit  
**Cage:** Dirty cage  
**Diet:** Proper diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Elmer  
**Age:** Young rabbit  
**Cage:** Dirty cage  
**Diet:** Proper diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Dottie  
**Age:** Older rabbit  
**Cage:** Clean cage  
**Diet:** Proper diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Carrot  
**Age:** Young rabbit  
**Cage:** Dirty cage  
**Diet:** Inappropriate diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides proper temperature regulation

*Print one-sided and cut out along dashed lines.*

**Rabbit Name:** Andy  
**Age:** Older rabbit  
**Cage:** Dirty cage  
**Diet:** Inappropriate diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides proper temperature regulation

**Rabbit Name:** Houdini  
**Age:** Older rabbit  
**Cage:** Dirty cage  
**Diet:** Proper diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Bailey  
**Age:** Older rabbit  
**Cage:** Clean cage  
**Diet:** Inappropriate diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Zorro  
**Age:** Young rabbit  
**Cage:** Clean cage  
**Diet:** Proper diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Callahan  
**Age:** Young rabbit  
**Cage:** Dirty cage  
**Diet:** Inappropriate diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Blinkey  
**Age:** Young rabbit  
**Cage:** Dirty cage  
**Diet:** Proper diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Duke  
**Age:** Older rabbit  
**Cage:** Clean cage  
**Diet:** Proper diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Peter  
**Age:** Older rabbit  
**Cage:** Dirty cage  
**Diet:** Inappropriate diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Cisco  
**Age:** Older rabbit  
**Cage:** Dirty cage  
**Diet:** Proper diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Daisy  
**Age:** Young rabbit  
**Cage:** Clean cage  
**Diet:** Inappropriate diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Betty  
**Age:** Young rabbit  
**Cage:** Clean cage  
**Diet:** Proper diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Coffee  
**Age:** Young rabbit  
**Cage:** Dirty cage  
**Diet:** Inappropriate diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Encore  
**Age:** Older rabbit  
**Cage:** Clean cage  
**Diet:** Inappropriate diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Fluffy  
**Age:** Older rabbit  
**Cage:** Clean cage  
**Diet:** Proper diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Dandelion  
**Age:** Older rabbit  
**Cage:** Dirty cage  
**Diet:** Inappropriate diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Merlin  
**Age:** Young rabbit  
**Cage:** Dirty cage  
**Diet:** Proper diet  
**Stress:** High stress level  
**Cage Temperature:** Cage provides improper temperature regulation

**Rabbit Name:** Amber  
**Age:** Young rabbit  
**Cage:** Clean cage  
**Diet:** Inappropriate diet  
**Stress:** Low stress level  
**Cage Temperature:** Cage provides improper temperature regulation

## Rabbit Illness Cards

Print one-sided and cut out along dashed lines.

**Coccidiosis.** This is a distressing disease that rabbits develop after licking dirty feet or coats or by eating and drinking contaminated food and water. It appears in dirty hutches with unchanged bedding and unclean feed and water dishes. The rabbit loses weight and sits in a hunched position with its feet forward. Those with a clean cage will not contract the disease, since they will never be exposed to the dirt that causes it. Those with a dirty cage must proceed to the Veterinary Hospital table.

**Ringworm (*bacterial*).** Those with a clean cage will not contract this disease because good rabbit hygiene helps the rabbit to avoid getting it or keeps it from spreading, so those with a dirty cage must proceed to the Veterinary Hospital table.

**Abscesses.** These are lumps that appear suddenly and are caused from fighting and from cuts and wounds sustained from sharp edges on feeders etc. Those with a low stress level and a good diet will not contract the disease, since they will be able to direct all of their energy and nutrients to their immune system and heal the wounds quickly, before they become too large of a problem. Those with a high stress level or a poor diet must proceed to the Veterinary Hospital table.

**Canker.** Cankers result from small mites that go inside the ear, irritating it until the ear emits a thin discharge, which then forms a crust. The rabbit will shake its head and constantly try to scratch its ear. Those with a clean cage and proper cage temperature will not contract this disease, since a clean cage with a proper temperature will keep mites out of the cage. Those with a dirty cage or improper cage temperature must proceed to the Veterinary Hospital table.

**Rabbit dental disease (*malocclusion*).** If the crown of a cheek tooth becomes overgrown it can come into contact with either the inside of the cheek or the edge of the tongue, resulting in painful ulcers. These ulcers can be painful enough to cause the pet to stop eating. Those with a low stress level will not contract the disease, since they will be able to direct all of their energy to their immune system and heal the ulcers quickly before they become too large of a problem. Those with a high stress level must proceed to the Veterinary Hospital table.

**Hair blockage.** A good diet would allow a rabbit to pass the hair, so those with a poor diet must proceed to the Veterinary Hospital table.

**Sore hocks (*infection of bottom of foot*).** Those with a clean cage will not contract this disease, since good rabbit hygiene helps the rabbit either avoid getting this or keeps it from spreading. Those with a dirty cage must proceed to the Veterinary Hospital table.

Print one-sided and cut out along dashed lines.

**Conjunctivitis.** This is an inflammation of the eye caused by bucks spraying urine, drafts, ammonia fumes, or a dusty atmosphere. Those with a clean cage and a proper cage temperature will not contract the disease, since these circumstances would not allow the conditions that cause the inflammation to exist. Those with a dirty cage or improper cage temperature must proceed to the Veterinary Hospital table.

**Red water.** The rabbit gives reddish urine, caused by cold temperatures or feeding on too many greens or carrots. Those with a proper diet and proper cage temperature will not contract this disease, since their cage would never be too cold and they would not be fed too many greens or carrots. Those with inappropriate diet or improper cage temperature must proceed to the Veterinary Hospital table.

**Heat stress.** A heat-stressed rabbit lies in a prostrate position panting rapidly. Those with proper cage temperature will not contract the disease, since they would never become too hot. Those with improper cage temperature must proceed to the Veterinary Hospital table.

**Cold or snuffles.** Symptoms are sneezing and a nasal discharge. Rabbits with a low stress level and a proper diet will be able to fight this disease because their immune system will have enough nutrients and energy to function perfectly. Those with a high stress level or inappropriate diet must proceed to the Veterinary Hospital table.

**Obesity.** Over-fed rabbits are subject to breeding difficulties, and affected animals may become sterile. Rabbits with a proper diet will never become overweight. Those with an inappropriate diet must proceed to the Veterinary Hospital table.

## Veterinary Procedure Cards

*Print one-sided and cut out along dashed lines.*

The vet gives you the proper medication and you follow all of the advice perfectly so your rabbit is cured quickly.

The vet explains what you need to change about your diet and gives you the proper medication and you comply and this cures your rabbit.

The vet explains what you need to change about your rabbit's hygiene and the cleanliness of the cage and in addition gives you the proper medication. You comply and your rabbit is cured.

The vet explains to you what you need to do to maintain a low stress level for your rabbit and gives you the proper medication. You do not comply. Your rabbit is cured temporarily but gets sick again.

The vet explains what you need to do to maintain a low stress level for your rabbit and gives you the proper medication. You comply and your rabbit is cured.

The vet explains to you how to better regulate your rabbit's cage temperature and gives you the proper medication. You comply and your rabbit is cured.

The vet explains what you need to change about your rabbit's diet and gives you the proper medication. You do not comply. Your rabbit is cured temporarily but gets sick again.

The vet explains what you need to change about your rabbit's hygiene and the cleanliness of the cage and gives you the proper medication. You do not comply. Your rabbit is cured temporarily but gets sick again.

The vet explains how to better regulate your rabbit's cage temperature and gives you the proper medication. You do not comply. Your rabbit is cured temporarily but gets sick again.

Date \_\_\_\_\_

## HEALTH CARE LOG

Rabbit Name \_\_\_\_\_ Breed \_\_\_\_\_ Gender \_\_\_\_\_ Age \_\_\_\_\_

Feeding Behavior \_\_\_\_\_

General Behavior \_\_\_\_\_

Coat \_\_\_\_\_

Skin \_\_\_\_\_

Eyes \_\_\_\_\_

Ears \_\_\_\_\_

Movement \_\_\_\_\_

Veterinary Updates \_\_\_\_\_

Other \_\_\_\_\_

## ACTIVITY 3



# My Rabbit's Health

### Background Information

All animals, including humans, are affected by the foods they eat and by their environment. As humans, we control what domesticated rabbits eat and the environment in which they live, so we need to be observant and aware of our animals in order to help prevent them from contracting **diseases** or **illnesses**. An unhealthy diet or an unsanitary or un-enriched environment (e.g., no toys) can cause rabbits to become ill or depressed. Owners can take care of rabbits by consistently feeding them healthy food, keeping their environment clean, and being constantly aware of their rabbits' condition and behavior.

### • Time Required

45 to 60 minutes

### • Concepts and Vocabulary

**Disease.** An abnormal condition that affects the normal function and health of an organism, decreasing the health of that organism.

**Health care monitoring.** Practices designed to observe and check the health of an animal that are systematic and intentional.

**Illness.** Being unhealthy and in poor health.

### • Life Skills

Teamwork, contributions to group effort, sharing, cooperation, communication, keeping records, critical thinking, problem solving, decision making

### • Subject Links

Science, Language Arts

### • State Content Standards

#### Science

- Third Grade:
  - » *Investigation and Experimentation-5e*
- Sixth Grade:
  - » *Investigation and Experimentation-7d*

#### Language Arts

- Third Grade:
  - » *Reading Comprehension-2.2, 2.6*
- Fourth Grade
  - » *Reading Comprehension-2.3*
  - » *Listening and Speaking Strategies-1.7*
- Fifth Grade:
  - » *Reading Comprehension-2.3, 2.4*
  - » *Listening and Speaking Strategies-1.5*
- Sixth Grade:
  - » *Listening and Speaking Strategies-1.5*
  - » *Speaking Applications-2.5b*

### • Suggested Groupings

6 small groups

### • Materials Needed

(\* = Materials provided with curriculum)

- \* *Health Assessment Journals* (6 rabbits)
- \* *Rabbit Disease Information*
- \* *Health Assessment Summary*
- Flip chart paper
- Markers or other writing implements

## Getting Ready

- Divide the youth into small groups of 3 to 5.
- Provide each group with adequate amounts of flip chart paper and markers or writing implements.
- Prepare one set of *Health Assessment Journals* (one rabbit; five journal entries) for each group
- Make one copy of the *Health Assessment Summary* for each group.
- Make enough copies of the *Rabbit Disease Descriptions* so each group has a set.
  - » **Note:** *Distribute the Rabbit Disease Descriptions worksheet at the end of the activity.*

## Opening Questions

1. **What are some ways to tell if someone is sick? What are some signs or symptoms that you might notice? Please describe.** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
2. **What do you know about the ways you get sick? What do you know about the ways animals get sick?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.
3. **Animals cannot speak, so they cannot tell us if they are not feeling well. What are some signs or symptoms that would help you to determine if an animal is sick? Please explain.** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.

## Procedure (Experiencing)

- » **Volunteer Tip:** *Set up the following scenario for the youth:*  
*Each group represents the owner of a particular rabbit (a different rabbit for each group; provided by the Volunteer). The groups are given daily journal entries of observations they have made about their rabbit. Based on the entries in their journals, their job is to look for important changes in their rabbit's health or behavior that might suggest a health concern.*

- » **Volunteer Tip:** *Provide each group the journal entries one day at a time. Do not give them the next day's entry until they have completed their work on the entry from the current day.*
1. Each group of rabbit owners is given Journal Entry 1 from their *Rabbit Disease Journal*. Have each group read their journal entry and record important facts from the journal entry on the *Health Assessment Summary*.
  2. Once the groups have finished recording and organizing the information from Journal Entry 1, take away Journal Entry 1 and provide them with the Journal Entry 2. Again, ask them to read their journal entry and record important facts from the journal entry on the *Health Assessment Summary*.
  3. Continue this process for Journal Entry 3, Journal Entry 4, and Journal Entry 5.
  4. At this point, pass out copies of the *Rabbit Disease Descriptions* and have each group review their *Health Assessment Report* and determine which disease(s) their rabbit might have. Have them write their suggested diagnosis and their basis for reaching this conclusion on their *Health Assessment Summary*. In a real-world situation, they would provide this summary to their veterinarian.

## Sharing, Processing, and Generalizing

Ask each group to share the results from their *Health Assessment Summary* and their suspected diagnosis. Follow the lines of thinking developed through the general thoughts, observations, and questions raised by the youth; if necessary, use more targeted questions as prompts to get to particular points. Specific questions might include

1. **When you were reading the journal entries, when did you begin thinking that it would be important to seek the care of a veterinarian?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.

» **Volunteer Tip:** *Have each group go back to their journal entries and ask them when they would have taken the rabbit to the veterinarian.*

**2. What do you think might happen if you wait too long to seek veterinary care?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.

**3. What might some of the consequences be if you don't monitor your rabbit's health on a daily basis?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.

**4. Based on your understanding, what are good signs to indicate that a rabbit is healthy?** Ask the youth to share their ideas verbally or write their thoughts and ideas on the paper provided.

» **Volunteer Tip:** *This is a good time to ask the youth which of the scenarios described a healthy rabbit and what information or data from the journal entries helped them to reach that conclusion.*

Check the suspected diagnosis from each group against the answer key provided below. If the diagnosis is incorrect, ask the youth to review their information and try again. If they do not achieve the correct diagnosis on their second try, discuss why they came up with the conclusion they did and look for inconsistencies in their data and analyses.

## Rabbit Disease Diagnosis Key:

- “Bagel” — Dental disease
- “Taco” — Ringworm
- “George” — Canker
- “Rebecca” — Mucoïd enteritis
- “Snowdrop” — Sore hocks
- “Peter” — Normal

## Concept and Term Discovery/ Introduction

At this point, volunteers need to ensure that the concept of **health care monitoring** has been introduced or discovered by the youth. (**Note:** The goal is to have the

youth develop concepts through their own exploration and define terms using their own words.)

## Concept Application

- Have youth who actually own rabbits write daily observations of their rabbits on the *Health Assessment Report*. Have them share their entries with the other youth on a regular basis.
- Youth who do not own rabbits can use the *Health Assessment Report* to record their observations for a different type of domesticated animal (e.g., a dog or cat) that they may have at home or that a friend or neighbor may have. Have them share these entries with the other youth and compare them with entries for the rabbits. How are they similar? How do they differ?

## References

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## Health Assessment Journals

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### Journal A

**Rabbit's name:** George

**Breed:** Angora

**Sex:** Male

**Age:** 2 years

**Journal A, Entry 1:** Today, I came out to play with George and everything seemed fine. I let him out of his cage and he happily hopped around and played with his toys. However, when I checked his cage, it seemed dirtier than usual. I cleaned his cage and supplied him with fresh water. While cleaning his cage, I noticed he ate all his beets but none of his corn.

**Rabbit's name:** George, **Breed:** Angora, **Sex:** Male, **Age:** 2 years

**Journal A, Entry 2:** Today, I came out to play with George and noticed him sneezing occasionally. He did not seem very excited to see me and did not seem to hop around as much today. I also noticed that his favorite toy, a green ball, was nowhere to be found. Today was a very hot day so I wanted to make sure he had enough food and water. I noticed he did not eat his beets and corn today. In fact, it looked like there was more food in his food bowl than normal.

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**Rabbit's name:** George, **Breed:** Angora, **Sex:** Male, **Age:** 2 years

**Journal A, Entry 3:** When I checked on George today, he seemed a bit livelier. He seemed excited to see me! In fact, he seemed to have found his green ball and was happy playing with it. However, he was constantly sneezing. When I looked at his water and food supply, I noticed he pushed everything to one side of his cage. He did however eat all of his food. I started to play with him and he seemed fine. The only weird thing was that he continually jumped side to side instead of forward and backwards. When I went to pick him up, he let out a big sneeze, which surprised me and caused me to drop George. When I picked him up again and scratched his ear, it seemed to upset him.

**Rabbit's name:** George, **Breed:** Angora, **Sex:** Male, **Age:** 2 years

**Journal A, Entry 4:** The first thing I did when I got home from school today was to check George's ears and give him new toys I'd bought for him. When I looked into his ears, they looked powdery brown, a lot like dirt. I just figured it was dirt. I tried playing with him but he seemed very lazy. However, when I showed him his new toys, he seemed really excited. Then, I noticed more discharge (brown substance that dried and turned crusty) between his nose and ears. I also noticed that the fur on one side of his body was really dirty and matted. I think he scratched this area of his body with a dirty paw. I checked his cage and it seemed clean. He ate all his food and water so I had to refill it.

**Rabbit's name:** George, **Breed:** Angora, **Sex:** Male, **Age:** 2 years

**Journal A, Entry 5:** Today, I came out to play with George and noticed immediately that he was acting very differently. He would not allow me to come near him. When I picked him up, he would not let me touch his ears. He no longer had any discharge on his face, but I noticed scabs in his ears. He constantly shook his head and scratched his ears. When I put him in his cage and gave him his new toys, he pushed them out and started to mess up his cage. He had not eaten his food. The only thing he would do was scratch his ears. When I tried to take him out, he would hide in a corner of his cage and not move. He had a very scared look on his face.

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## Journal B

**Rabbit's name:** Rebecca

**Breed:** Belgian Hare

**Sex:** Female

**Age:** 6 years

**Journal B, Entry 1:** Today was a very hot day! I brought home a friend who was a foreign exchange student. I told her about Rebecca and she wanted to see and play with her. When she was playing with Rebecca, she accidentally dropped her. She fell a high distance from the ground. I was worried about Rebecca so I put her back in her cage for her to rest. Later that day, while I was cleaning Rebecca's cage, I noticed that she had not eaten much of her food. Her droppings were round and firm. Her behavior seemed normal but her activity level seemed a bit low

**Rabbit's name:** Rebecca, **Breed:** Belgian Hare, **Sex:** Female, **Age:** 6 years

**Journal B, Entry 2:** Today was another hot day. Usually, when I take Rebecca out and place her on the ground, she hops out of my hand. Today, when I took her out, she did not move. When I placed her on the ground, she either moved really slowly or just sat still. When I started to pet her, I noticed that her ears seemed very moist. I placed her back into her cage and noticed something strange about her cage. Then I realized that she had torn up all the newspaper in the cage and moved her toys around! When I looked at her droppings, I noticed that they weren't as firm as yesterday. I also noticed that she had not eaten much and that there was fur at the bottom of her cage.

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**Rabbit's name:** Rebecca, **Breed:** Belgian Hare, **Sex:** Female, **Age:** 6 years

**Journal B, Entry 3:** I came to check on Rebecca and see if she wanted to play with me. When I came to her cage, she was huddled in the same corner I left her in yesterday. I looked at the cage and saw that it was a mess! I just realized that I forgot to clean it yesterday. I looked at her droppings and some seemed very runny. I changed the food and water, which looked like it had not been touched all day. Because it was a hot day again, after I cleaned the cage, I took Rebecca inside to enjoy the cool air-conditioned house. When inside the house, she seemed very happy, hopping around the living room and playing with her toys. When her play time was about up and as I was about to pick her up, she let out a very loud sneeze, which startled me! I tried to pick her up but she hopped away from me. It took me awhile before I caught her and put her back into the cage.

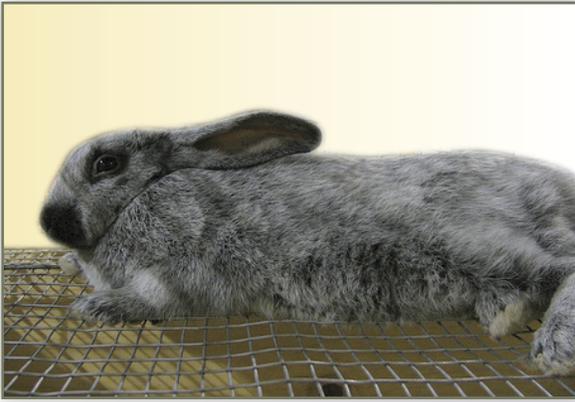
**Rabbit's name:** Rebecca, **Breed:** Belgian Hare, **Sex:** Female, **Age:** 6 years

**Journal B, Entry 4:** Today when I came to see Rebecca, she had only moved slightly from the spot where I left her yesterday. I looked at her food bowl and noticed that she had not eaten her pellets but had nibbled on some carrots and corn. I looked at her droppings and noticed that a few were runny. When I went to pick Rebecca up, I noticed a yellow tint on her fur. Her belly also seemed very round and full. When I started to play with her, she started to perk up.

**Rabbit's name:** Rebecca, **Breed:** Belgian Hare, **Sex:** Female, **Age:** 6 years

**Journal B, Entry 5:** Today I came to check on Rebecca and noticed that she looked awfully thin but her belly still seemed very round. When I looked at her droppings, they were in the same place I saw them the day before. The droppings looked very runny with a jelly substance in them. She had not eaten the carrots and corn I left for her during breakfast. I tried to pick her up but she wouldn't let me. She wouldn't play with the toys I put in front of her. Overall, she seemed very nervous and frightened.

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## Journal C

**Rabbit's name:** Bagel

**Breed:** American Chinchilla

**Sex:** Female

**Age:** 1 year

**Journal C, Entry 1:** When I came home from school, I let Bagel out and she happily hopped around the house. I noticed that Bagel hadn't eaten any of the carrots, pellets, or apples I left for her before I went to school that morning. I watched her while doing my homework and noticed she eventually ate some soft fruits, such as melon and peaches. I took a closer look at Bagel and saw her eyes seemed very watery and it looked like she had been crying. I looked at the thermometer in the house and noticed that the temperature was a bit higher than yesterday. I looked at her droppings and noticed they were hard and round. I would occasionally see Bagel scratching a small portion of her back with her hind leg, making a loud thumping noise.

**Rabbit's name:** Bagel, **Breed:** American Chinchilla, **Sex:** Female, **Age:** 1 year

**Journal C, Entry 2:** When I came to check on Bagel's eye, it no longer seemed very watery. When I let her out of her cage today, she seemed very excited to get out and cheerfully hopped around. As I was preparing for bed, I started to hear a grinding sound coming from Bagel's cage. I decided to check it out. When I got to the cage, I saw Bagel sitting in the back of her cage grinding her teeth. I looked at her food and water and noticed that some alfalfa pellets were in the water bowl and had become very soggy. I cleaned out the water bowl and replaced it with fresh water. I had a hard time falling asleep due to Bagel grinding her teeth.

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**Rabbit's name:** Bagel, **Breed:** American Chinchilla, **Sex:** Female, **Age:** 1 year

**Journal C, Entry 3:** Today, Bagel didn't eat much but she does occasionally drink water. When I first saw her, there was a lot of drool coming from her mouth. There was also a clear liquid coming out of her nose. When I pet her fur, it was still fluffy. Her temperature seemed fine. She seemed uninterested with her favorite chew toys. Bagel still hopped around the house but she would hide under tables and chairs. I checked her litter box and noticed that there were fewer droppings than yesterday.

**Rabbit's name:** Bagel, **Breed:** American Chinchilla, **Sex:** Female, **Age:** 1 year

**Journal C, Entry 4:** When I went to pick up Bagel today, she started struggling really hard. I didn't have a good grasp on her but held her tightly and close to my body until she stopped struggling. I noticed her eyes were tearing up and appeared to be bulging out of her eye sockets. Her nose started to run with a clear liquid coming out. She seemed almost motionless or lazy, eating only the peaches in her food bowl. I checked the thermometer in the house and noticed it was a lot warmer than the previous days so I turned on the air conditioning. There are a few droppings in her litter box and they were round and hard. When observing Bagel, I noticed her head was tilted at an angle and she would occasionally shake it from side to side.

**Rabbit's name:** Bagel, **Breed:** American Chinchilla, **Sex:** Female, **Age:** 1 year

**Journal C, Entry 5:** It was a little warmer in the house today compared to yesterday. Bagel acted about the same today as she had during the previous four days. She looked very weak and tired, and wouldn't stop grinding her teeth. She looked teary-eyed, was drooling, and had a runny nose. Throughout the entire week her droppings and urine appeared normal. As I fed Bagel a peach, I noticed that the peach had small, bruised areas on it, but Bagel didn't mind and ate the whole thing slowly. I tried to feed her pellets, but for some reason Bagel kept dropping them. The alfalfa pellets felt hard and brittle. In the evening, my mother spilled some tea on the kitchen floor and before I could stop her, Bagel hopped over and drank some of it.

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## Journal D

**Rabbit's name:** Taco

**Breed:** Palomino

**Sex:** Male

**Age:** 2 years

**Journal D, Entry 1:** Before leaving for soccer practice on Monday, I made sure that Taco had enough food and water. When I approached his cage, I noticed Taco hiding in a corner of the cage, thumping his foot and scratching at his fur. I observed him for the rest of the day and noticed that he was lively and was eating normally. His litter box had round droppings. Throughout the day I heard Taco cough from time to time. I let Taco out into the backyard and observed him hopping in circles. When Taco came back into the house, his fur was all wet. Since it rained last night, he probably just hopped into a puddle.

**Rabbit's name:** Taco, **Breed:** Palomino, **Sex:** Male, **Age:** 2 years

**Journal D, Entry 2:** Today, Taco seemed fine except he constantly was scratching his fur. While doing my homework later that day, Taco hopped next to my feet and started to shake his head back and forth. I watched him closely and noticed he was also scratching his ears. When I picked him up, he started to struggle so I bent down to the ground and let him go and waited until he calmed down. Once he calmed down, I picked him up again and looked into his ears but didn't find anything unusual. I checked his food bowl and noticed that he ate most of the vegetables and fruit. He also ate some alfalfa pellets. However, he ignored the cucumbers. Later that night, I gave him a carrot, but he did not want it.

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**Rabbit's name:** Taco, **Breed:** Palomino, **Sex:** Male, **Age:** 2 years

**Journal D, Entry 3:** Today I bought Taco new toys and watched him as he chewed and played with them. While playing, Taco continued to scratch his ears, back, and legs. I looked in his cage and noticed it was covered with fur. I looked again at Taco and noticed that there was a lot of fur coming off around his head! I gave him a few treats to make him feel better and noticed that he had the same appetite as before. I checked his litter box again and saw mostly round droppings, but one dropping was abnormally shaped. In the afternoon, I mowed the front lawn and some grass cuttings got stuck on my pants. As I walked into the house, Taco grabbed the grass on my pants and ate it.

**Rabbit's name:** Taco, **Breed:** Palomino, **Sex:** Male, **Age:** 2 years

**Journal D, Entry 4:** More patches of fur had fallen off of Taco's body and his skin started getting red in places around his head and legs. Later that day I noticed that entire patches of fur had come off around Taco's head, ears, and legs! Taco was still shaking his head back and forth. When I looked into his ear canal, I still didn't notice anything. Today Taco ate lettuce, some cabbage, and an apple. He also ate some alfalfa pellets, but he only ate half of each pellet, leaving half-eaten pellets all over his cage. As I changed his water bowl, I saw a cloudy substance in it. His cage seemed to be dustier than the last time I cleaned it. At night, it started to rain.

**Rabbit's name:** Taco, **Breed:** Palomino, **Sex:** Male, **Age:** 2 years

**Journal D, Entry 5:** When out of his cage, Taco started running in very irregular patterns around the house. Taco's skin looked redder and flakier than the previous days. In the evening, I noticed red spots on my arm that really itched! I then just realized that I forgot to clean Taco's cage last week. So immediately I went to his cage and cleaned out his bedding and litter box and threw out his old round droppings. While cleaning, Taco's cage seemed very wet and produced a weird smell. I then checked the thermostat in the house and it was two degrees colder than yesterday. That night it rained again.

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## Journal E

**Rabbit's name:** Snowdrop

**Breed:** English Lop

**Sex:** Female

**Age:** 5 years

**Journal E, Entry 1:** Today I came back from my family vacation and noticed that the neighbor forgot to clean Snowdrop's cage or empty her droppings during the ten days that I had been gone. In addition, Snowdrop had no water left in her bowl and it was a very hot day. Which cleaning her cage, I noticed that all of Snowdrop's toys smelled like urine. After I cleaned her cage, I asked my mom to help me clean the feces and urine off Snowdrop. When I went to pick her up, I told my mom to hold her hind legs while I held her front legs. After I cleaned Snowdrop off, I played with her for a long time and she seemed excited to see me. She would start doing tricks such as jumping and rolling on her back, which was very unique. When I put her in her cage, she seemed happy, probably because her cage was now clean and that she now has fresh water and food. She was so cheerful that she started to act silly and chase her tail.

**Rabbit's name:** Snowdrop, **Breed:** English Lop, **Sex:** Female, **Age:** 5 years

**Journal E, Entry 2:** Today I rushed home from school with my best friend to show him Snowdrop's new trick. Unfortunately when I took Snowdrop out of her cage, she didn't want to do anything but lie down. I even rolled on my back to see if she would copy me, but she just wanted to lie there. My best friend became uninterested and went home. I continued to try to play with Snowdrop, but she didn't seem to want to. When I put her back in her cage, she tried to sit on her food bowl, tipping the whole thing over. I ended up having to clean her cage again. While cleaning the cage, I noticed her favorite toy was missing. I will try to remember to replace her toy on the way home from school tomorrow.

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**Rabbit's name:** Snowdrop, **Breed:** English Lop, **Sex:** Female, **Age:** 5 years

**Journal E, Entry 3:** After I picked up another toy similar to her favorite one, I checked up on her in her cage and noticed that she was lying down on top of her flipped over bowls. Her food and water were everywhere. Looking at what was scattered, I got the idea that she had not eaten any of her food or drunk any of her water, which was very unusual for Snowdrop. I tried to get her to come to me, but after moving a little, she began to shift her weight back and forth between her feet. I picked her up and put her on the concrete. She hurried over to the tall grass and plopped down. She was wiggling her nose and batting at her face much more than usual. Since she didn't seem to want to play, I put her back in her cage and refilled her water and food. I hope she will eat something today.

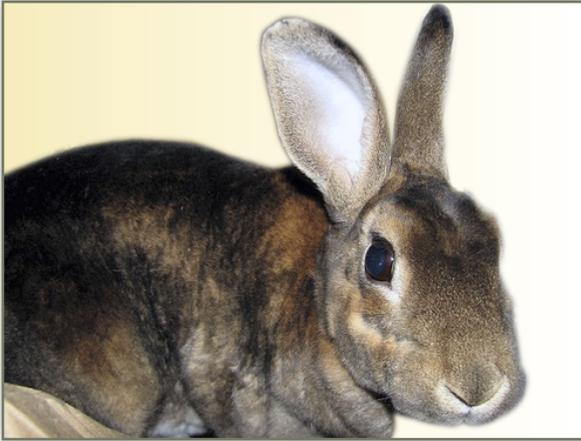
**Rabbit's name:** Snowdrop, **Breed:** English Lop, **Sex:** Female, **Age:** 5 years

**Journal E, Entry 4:** Before going to school, I refilled Snowdrop's food and water. Immediately after I had refilled them, she flipped over her bowls and was lying on top of them. So I decided to put another set of bowls in the cage with food and water and headed off to school. When I came home from school, I noticed she had finally eaten all her food except her carrots. I put her outside on the tall grass; she lay there and began licking her paws and washing her face. When I finished petting her, I put her back in her cage. When I looked at the bottom of her feet, I saw that her back feet were red and swollen with a clear liquid coming out of them.

**Rabbit's name:** Snowdrop, **Breed:** English Lop, **Sex:** Female, **Age:** 5 years

**Journal E, Entry 5:** Before school, I asked my mom to put food and water in the separate bowls while I checked Snowdrop's feet. They looked the same as the night before but I didn't have any time to treat them because I was late for school. When I got home from school, I checked Snowdrop's feet again and now they looked raw and cut up and were bleeding. I took her inside and washed her feet but this seemed very painful for her. I put a blanket in her cage and put her on it. She lay down immediately and fell asleep.

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## Journal F

**Rabbit's name:** Peter

**Breed:** Rex

**Sex:** Male

**Age:** 3 years

**Journal F, Entry 1:** *The weather today was sunny most of the day with a few sprinkles in the morning. When I came home from school, I noticed that Peter had eaten all his food. I had to change his water once. I let him out for 3 hours in the backyard and he ran around happily. He played with his favorite orange wooden carrot toy. His droppings were normal: hard, round, and dry. When I checked on him, everything seemed fine. His eyes were clear, his nose was dry and his fur was very shiny. While cooking at night, I dropped a large cooking pot. The noise scared Peter and he hid in the corner of his cage for about an hour but later came out.*

**Rabbit's name:** Peter, **Breed:** Rex, **Sex:** Male, **Age:** 3 years

**Journal F, Entry 2:** *There was a big heat wave today. I put small bowls of frozen water in Peter's cage to keep him cool. I had to refill his water bottle three times today. Throughout the day, his droppings were normal and his nose was dry. Around noon, it was over 90°F so I let Peter inside the air-conditioned house. He ate most of his food today, but he left out some of the carrots. There was a puddle of water near the air conditioner and Peter jumped into it, getting himself completely wet. When it was cooler outside, I let him go outside and dry off. When I put him back into his cage, I noticed he had gotten a little dirty.*

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**Rabbit's name:** Peter, **Breed:** Rex, **Sex:** Male, **Age:** 3 years

**Journal F, Entry 3:** The heat wave passed and today was cloudy and breezy. Even though it was muggy today, it is not as hot as yesterday. I refilled Peter's bottle only two times and he ate all of his food. I had time earlier today to go to the pet shop and I got some of his favorite rabbit treats. Out of the three pieces I put in his bowl, he ate all three that I gave him! His droppings were normal today. In the late afternoon, the neighbor's dog was barking very loudly, which woke Peter up and caused him to hide in a corner. He usually plays with his favorite orange toys everyday, but today he did not.

**Rabbit's name:** Peter, **Breed:** Rex, **Sex:** Male, **Age:** 3 years

**Journal F, Entry 4:** Yesterday at the pet store, I bought Peter purple wooden chew toys, but he did not seem to like them. Instead, he played with his favorite orange toys. I let him out in the yard and played with him, chasing him back and forth across the yard. The weather was cloudy but fairly warm. While playing, I noticed he started to scratch his ear. He also started digging holes in the yard, which was a bit unusual. When I put him back in his cage, it looked like he didn't drink much water today. His eyes were clear, his fur was shiny and thick and his droppings were hard, round, and dry. While in his cage, Peter was constantly moving around. It was not until a couple of hours later that he settled down and fell asleep.

**Rabbit's name:** Peter, **Breed:** Rex, **Sex:** Male, **Age:** 3 years

**Journal F, Entry 5:** Today, I gave Peter another new toy, a green ball, as well as another orange toy with a bell on the bottom. Peter constantly played with his new toys and started gnawing on his purple chew toys. He ate most of his food today, except he had a few beets left over. My brother wanted to play with Peter and started to take him out by the ears. I stopped my brother because I knew it would hurt Peter. I took him out later, coaxing him with a treat before picking him up properly. I played with him and fed him treats. He only ate 2 treats today. The weather today had a slight drizzle and was fairly cool. When I put him back into the cage, I noticed that his fur got wet.

## Rabbit Disease Information

**Dental disease (malocclusion) (pronounced “mal-uh-kloo-zhuhn”).** As an herbivore, a rabbit has large incisors at the front of the jaw and larger molars in the cheek to break down its food. A rabbit's teeth are constantly growing. By providing a rabbit with the correct diet, you allow it to wear down its teeth and maintain them at a proper length. If the teeth are not worn down properly, dental disease can develop. Dental disease may start in one tooth, but eventually it will affect the entire jaw.

Dental disease occurs when the teeth are not shaped or worn down properly and they come into contact with the rabbit's cheek or tongue, creating sores. These can be so painful that the rabbit will stop eating. Most symptoms of dental disease result from deformed teeth and the infections caused by these deformities.

Rabbit dental disease has many causes. One common cause is the genetically determined shape of the rabbit's jaw. Some rabbits have dental disease naturally from birth and must have their teeth maintained for their entire life. Another cause is injury to the rabbit's jaw area. A broken tooth or jaw can cause the teeth to grow at abnormal angles. A change in the calcium level in a rabbit's body can cause dental disease by weakening the tooth and causing it to shift position. Diet is also a common cause of dental disease when the rabbit does not have enough hard objects to chew, causing its teeth to overgrow.

There are many symptoms of dental disease:

- *Loss of appetite.* Pain from the teeth is a common cause for loss of appetite. Another cause is teeth that have become so long that the rabbit cannot hold the food in its mouth.
- *Being selective about food.* A rabbit with dental disease may only want to eat softer foods, such as fruits, and may avoid harder foods like carrots.
- *Teary eyes.* If some of the teeth are infected due to dental problems, the infection can cause inflammation in the tear duct and block it so no tears will drain from the eyeball. This causes the rabbit to tear up in the eye so that the tears drip down its face.

- *Nasal discharge.* Like teary eyes, nasal discharge means that there is inflammation. In this case the inflammation is in the sinuses and prevents nasal fluids from draining properly.
- *Drooling.* This is caused either by pain or by the rabbit's inability to close its mouth.
- *Excessive teeth grinding.* Rabbits commonly grind their teeth more when they have dental disease.
- *Bulging eyes.* An infection can cause pressure to build up in the eye, making the rabbit's eyeball bulge out.

Frequent monitoring of the rabbit and regular checkups can prevent dental disease. **If dental disease does occur, it is best to take the rabbit to the veterinarian as soon as possible.**

**Rabbit cold.** Just like humans, rabbits are vulnerable to infections that can cause the common cold. Symptoms are very similar to those of humans:

- Inactivity or laziness
- Teary eyes
- Sneezing
- Runny nose
- Increased temperature (normal body temperature ranges from 101°F to 103°F)
- Coughing
- Loss of appetite

It is important that the eye and nasal discharge be clear and not have any color. If the rabbit has colored discharge, **you must get the rabbit to a veterinarian immediately.** Other infections that can cause a cold can also cause a rabbit's droppings to be abnormal. If droppings are not round and hard or if they look like diarrhea, it is a sure sign that your rabbit has some kind of infection.

**Ringworm.** Ringworm is a fungus that can cause infections in both rabbits and humans. It spreads by direct skin-to-skin contact.

Like any other fungus, ringworm begins when fungal spores grow in wet areas. Wet bedding or a wet litter box can be great areas for ringworm to grow. Keeping a rabbit's coat and habitat dry are the first and most important steps in preventing a ringworm infection. The symptoms of ringworm include

- Excessive shedding of fur
- Reddish skin
- Patches of hairless areas on the skin, commonly with a crusty surface. The patches of hairless areas are usually on the rabbit's ears, head, and forelimbs.

Since this disease can be spread to humans, **it is very important that the rabbit be taken to the veterinarian as soon as possible.**

**Ear mite (ear canker, ear mange).** Ear mite infestation in rabbits is a common disease. An ear mite is a very small spider-like creature that infects the ear of a rabbit. The mite only spreads in rabbits, and it is easy to treat if spotted early. However, it is sometimes difficult to detect. The signs of ear mite are

- Rabbit scratching at ear
- Head shaking
- Dark brown crusty, waxy substance in ear canal
- Ear canal red and inflamed



If not treated, an ear mite infestation can lead to other infections, producing symptoms similar to a cold. Prevent ear mite infections by keeping your rabbit's ears clean. Use a commercial ear cleaning solution to remove dirt and foreign matter in the ear. **If anything looks abnormal, seek veterinary help immediately.**

**Pasteurellosis (pronounced "pas-tu-re-low-sis").** Pasteurellosis in rabbits is a bacterial illness. The disease is highly contagious and can be transmitted via direct or indirect contact, and the pathogen is one of the most common disease-causing agents in rabbits. The bacteria can be found in the rabbit's nose, lungs, and eye membranes, but they can also spread to other parts of the body. Infections vary in severity and can have different symptoms and signs. Some affected rabbits die with only a few symptoms, while others develop more chronic forms of infection. Symptoms to watch for are

- Depression
- Loss of appetite
- Weight loss
- Difficulty breathing
- Discharge from the nostrils
- Swelling of the tissues around the eyes
- Discharge from the eyes
- Moistened forelimbs from rubbing the eyes and nose
- Abscesses
- Blood in the urine
- Vaginal discharge (females)
- Abortion
- Head shaking
- Head tilt

This disease is persistent in most rabbitries and can be very serious where rabbits are malnourished, live in overcrowded situations, have poor sanitation, experience temperature extremes or inadequate air circulation, or are exposed to other stressful situations. **When purchasing a rabbit, make sure it is thoroughly examined by a veterinarian as soon as possible after purchase.** Antibiotics may eliminate the infection, but if it is chronic it is difficult to eliminate. If a rabbit is infected with this disease, keep it on a good diet and place it in a stress-free environment. Make sure your rabbits are clean and are housed in a well-ventilated area.

**Coccidiosis (pronounced “kok-si-dee-oh-sis”).**

This disease is caused by a protozoan (one-celled) parasite and infects the liver and intestinal tract. Rabbits become infected with this disease after eating food or drinking water that has been contaminated with the feces of an infected rabbit. Symptoms vary depending on whether the disease is affecting the liver or the intestinal tract.

*Liver infection symptoms:*

- Diarrhea

*Intestinal tract infection symptoms:*

- Weight loss
- Soft to watery feces
- Mucus or blood in feces
- Soiled anal area
- Dehydration
- Increased thirst
- Possibly death

The severity of infection (both types) depends on how many protozoa the rabbit ate, the age of the rabbit, the strength of the rabbit's immune system, and other illnesses the rabbit might currently have. Occasionally, the protozoa can infect the nasal passages, resulting in respiratory disease (nasal coccidiosis). Currently there are no vaccines against this disease. Prevention includes keeping the rabbit's environment clean and avoiding contact with infected feces or food and water contaminated with feces. **If your rabbit has any of the symptoms listed above, seek immediate veterinary care.**

**Mucoid enteritis (pronounced “myoo-koid en-tuh-rhy-tis”).** This illness causes rabbits' droppings to fill with a jelly-like substance. Eventually, the rabbit develops a pot-bellied appearance with its stomach area looking like a filled water bottle. Symptoms include

- Grinding of the teeth
- No appetite
- Diarrhea

Prevention includes feeding your rabbit a proper ration that is high in fiber and low in protein. Regular enrichment with long-stem hay will often help correct the condition.

**But consult with your veterinarian first before taking any action.**

**Sore hocks.** This disease infects the bottom and the hind feet of the rabbit. Sores that appear on those areas usually are caused by urine irritation of the skin and a poorly cleaned cage. Wire floors can also encourage sore hocks. Symptoms include

- Shifting back and forth on the feet
- Laying down more than usual
- Trying to sit on things other than the wire and staying off the feet due to the sores

In the beginning, the bottom of the rabbit's feet will become red and lose fur. They will eventually harden and begin to bleed. Eventually, the skin surface will start to look like cottage cheese and still continue to bleed. If left untreated for a long time, the rabbit could permanently lose the ability to grow fur on the infected area. **Seek veterinary help immediately.** A good way to prevent this disease is to always keep the rabbit's cage clean.

**Abscess (pronounced “ab-sess”).** Abscesses are formed by bacteria. Bacteria feed on accumulated fluid in or on the rabbit's body, which provides an ideal place for bacteria to breed (reproduce). Symptoms include

- Pockets of pus that form on the rabbit's tissue. They can form anywhere on the rabbit (on its liver, bones, skin, face, etc.).
- Inflamed (irritated) thickened tissue around the pockets of pus.

If you see or feel any lumps on your rabbit, there is a high chance that it is an abscess. **To be certain, always consult a veterinarian.** The most important way to prevent abscesses is to make sure the rabbit exercises every day, has a healthy diet, and lives in a clean home.

**Obesity (pronounced “oh-bee-suh-tee”).** Obesity occurs when a rabbit has too much body fat and becomes heavier than its breed’s average body weight. This condition occurs when a rabbit is fed an unhealthy diet, meaning that it is fed too many treats or too much food. Some clear signs of obesity are

- Potbelly
- Extra padding in the shoulders, legs, and groin

If the rabbit’s obesity is untreated, it can cause various problems throughout the rabbit’s body. For example, too much weight will put too much pressure and stress on the bones and joints so the rabbit will have a difficult time moving about.

A good way to prevent obesity is to make sure the rabbit eats an appropriate diet. Ask your veterinarian for advice on what to feed the rabbit. Even feeding your animal excessive amounts of vegetables (like carrots) can cause the rabbit to become overweight! It is important to find the correct diet for your rabbit.

## Handling and Restraint

- Rabbits are very delicate creatures, so it is very important to know how to handle a rabbit in a way that will not cause it any harm or injuries. Improper handling can cause the rabbit serious, life-threatening injuries.
- A rabbit’s spine is extremely fragile. Back injuries most often occur when rabbits are dropped or improperly picked up or restrained. When a rabbit becomes frightened, it will struggle violently, using its strong back legs to try to break free. Holding a rabbit improperly while it tries to free itself can cause the rabbit to overextend the lower back region of its spine, leading to fractures and dislocations. When handling a rabbit, do not try to overpower it.
- Signs of back injury may include a lack of coordination, uncontrolled urine-soiling and defecation, or in the most serious cases, paralysis of the rear legs. Any rabbit exhibiting any of these signs should be examined by a veterinarian at once.

- Speaking softly while you approach a rabbit can help when you will need to restrain it.
- By covering the rabbit’s eyes and lightly stroking it, you can often induce a trance-like state for the rabbit. A rabbit in this condition will usually be more relaxed and less prone to panic and injury.
- Rabbit ears have a very complex system of blood vessels that are involved in heat regulation and sound gathering. A rabbit should NEVER be picked up by its ears nor should its ears be held as a means of restraint. Also, never hold a rabbit by its limbs or tail.
- It is important to know how to properly handle and restrain a rabbit, but it is also important to recognize that some rabbits simply do not like to be picked up. Repeated practice of picking up and setting down a rabbit will build your confidence and allow the rabbit get used to being picked up. Rewarding a rabbit after you have picked it up will also help decrease its fear of being picked up.
- When holding a rabbit, hold it close to you. Rabbits are unpredictable and may kick and struggle at any moment, so be prepared! If you have a secure grasp on your rabbit and it tries to struggle out of your grasp, hug the rabbit to your body and hold it close. This will protect both you and the rabbit. If you don’t have a good grasp on the rabbit, get it close to the ground immediately and safely let it go.

Please review the suggested references below for proper rabbit handling and restraining techniques.

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- Harriman, Marinell. 2005. House rabbit handbook: How to live with an urban rabbit. Alameda, CA: Drolley Press.
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### HEALTH ASSESSMENT SUMMARY

Rabbit Name \_\_\_\_\_ Breed \_\_\_\_\_ Gender \_\_\_\_\_ Age \_\_\_\_\_

**General Symptoms**

Is there anything you notice that you should be concerned about?

Day 1 \_\_\_\_\_  
\_\_\_\_\_

Day 2 \_\_\_\_\_  
\_\_\_\_\_

Day 3 \_\_\_\_\_  
\_\_\_\_\_

Day 4 \_\_\_\_\_  
\_\_\_\_\_

Day 5 \_\_\_\_\_  
\_\_\_\_\_

**Handling and Restraint**

Describe how the rabbit was handled. \_\_\_\_\_  
\_\_\_\_\_

Was the rabbit handled appropriately? If not, in what way was it inappropriately handled? \_\_\_\_\_  
\_\_\_\_\_

**Suspected Diagnosis** *(Use the Rabbit Disease Descriptions)* \_\_\_\_\_  
\_\_\_\_\_

**Observations**

1. Explain which symptoms from the above journal helped you identify a problem, and how. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

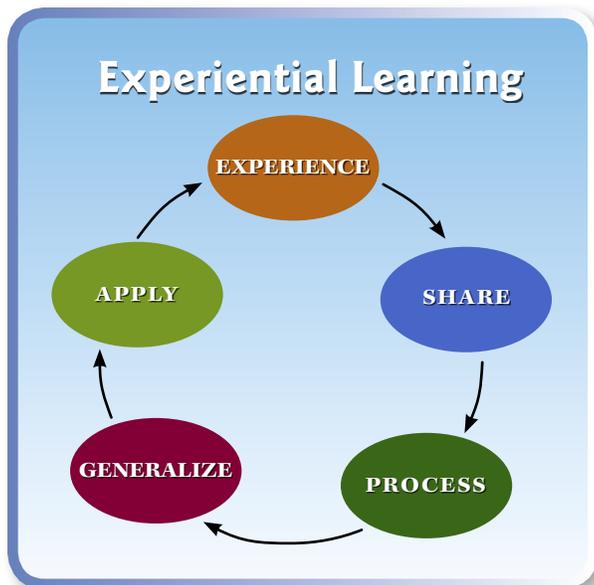
2. What other observations do you think might be important? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. How would recording daily observations of your rabbit help you monitor your rabbit's health? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## APPENDIX

The activities in this curriculum were designed around inquiry and experiential learning. Inquiry is a learner-centered approach in which individuals are problem solvers investigating questions through active engagement, observing and manipulating objects and phenomena, and acquiring or discovering knowledge. Experiential learning (EL) is a foundational educational strategy used in 4-H. In it, the learner has an experience phase of engagement in an activity, a reflection phase in which observations and reactions are shared and discussed, and an application phase in which new knowledge and skills are applied to a real-life setting. In 4-H, an EL model that uses a five-step learning cycle is most commonly used. These five steps—Experiencing, Sharing, Processing, Generalizing, and Application—are part of a recurring process that helps build learner understanding over time.

For more information on inquiry, EL, and the five-step learning cycle, please visit the University of California Science, Technology, and Environmental Literacy Workgroup's Experiential Learning Web site, <http://www.experientiallearning.ucdavis.edu/>.



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