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YOUTH DEVELOPMENT THROUGH VETERINARY SCIENCE 8 Is Your Dog Feeling Down?

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Subject Overview and Background Information

Dogs are domesticated from wolves and have been associated with humans for between 12,000 and 150,000 years. Originally, dogs were used as hunting partners and for guarding, but dogs have been used for many other jobs since then. Today, dogs are bred for hunting, guarding, and herding, as well as for companionship. The American Kennel Club divides dogs into seven categories: sporting, hound, working, terrier, toy, nonworking, and herding. Today, dogs are one of the most popular species of animals to have as pets. A male dog is called a **dog**; a female is called a **bitch**; a young dog is called a **puppy**; and a dog of mixed breeds is called a **mutt** or **mongrel**.

Dogs are naturally social animals that live in packs. They have a social hierarchy with an alpha male and an alpha female. They are **carnivores** but can and will eat vegetation for supplementation. Bitches can come into heat at any time of the year. If impregnated, a female will produce a **litter** of puppies. Puppies are born blind and deaf but develop these senses within a few days after birth. Dogs normally live between 8 and 14 years; typically, the larger the dog, the shorter the life expectancy. Many different diseases and disorders affect dogs. Like humans, dogs suffer from **bloat**, heart disease, diabetes, allergies (e.g., **food allergies**), and obesity. Both humans and dogs can also be affected by parasites that can lead to diseases such as **Lyme disease**, and they can also suffer infestations of mites or hookworms. Dogs exhibit an array of genetic disorders ranging from skeletal problems like **hip dysplasia** to hearing and vision problems. Vaccinations are given to prevent

viruses such as rabies, **parvovirus**, and distemper; some viral diseases are transmissible between dogs and humans.

As with any pet, proper care is essential to keeping a dog healthy. It is important to take a dog to the veterinarian at least once a year for a checkup and vaccinations. It may be necessary to take a puppy or an older dog to a veterinarian more

frequently. Proper feeding can help prevent diseases such as bloat, while just watching a dog for itching can alert an owner to fleas, ticks, or allergies. For viruses such as rabies or parvovirus, vaccinations are the best prevention. Along with proper vaccination and disease prevention, it is important to keep dogs fit, since obesity is a serious problem for dogs.

2

Different breeds require different amounts of daily exercise, so it is important that you research the breeds and choose a dog that will need only as much exercise as you can give it.

Activity Concepts and Vocabulary

- Bacterial infection: A disease caused by bacteria.
- Bacterium (bak-teer-ee-um), pl. bacteria: An organism that cannot be seen with a naked eye. Some bacteria (germs) can cause diseases. Pneumonia, a disease that affects animals' lungs, is caused by a bacterium.
- Carnivore (kahr-nuh-vohr): An animal that eats meat.
- **Fungus (fuhng-guhs)**: An organism (e.g., mold, yeast) that lives and feeds on organic material such as bread, wood, and other animals. A common fungus that affects animals is ringworm.
- Inflammation (in-fluh-mey-shuhn): A local reaction of a tissue to irritation that causes pain and swelling.
- **Parasite (pair-uh-site)**: An organism (e.g., bacterium, worm, tick) that receives food and energy from another organism. A common parasite that affects animals is tapeworm.
- Veterinarian (vet-er-uh-nair-ee-uhn): A doctor who takes care of animals.
- Virus: A type of germ that causes diseases. Rabies is a disease caused by a virus.
- Zoonotic diseases (zoe-oh-nah-tick): A disease that affects an animal that can also be passed to humans.

Life Skills

- **Head**: Keeping records, planning and organizing, problem solving, decision making, critical thinking
- **Heart**: sharing, communication, concern for others, empathy
- Hands: self-motivation, teamwork
- **Health**: Disease prevention, self responsibility, personal safety

Subject Links

Science and Language Arts

State Content Standards

Science

- Third Grade • *Investigation and Experimentation: 5e*
- Fourth Grade
 - Investigation and Experimentation: 6c
- Fifth Grade
 - Investigation and Experimentation: 6h, 6i
- 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

Purpose of Activities

To help youth learn about the proper maintenance and care of dogs. Youth will also investigate the causes and symptoms of several dog diseases.

Monitoring Dog Health Day by Day

ΑCTIVITY

Overview of the activity



The main goal of this activity is for youth to learn to make good physical and behavioral observations of dogs by reading and analyzing descriptive journal entries. Youth will then use

these observations to make inferences regarding the health of their dog.

Time Required

Approximately 90 minutes

Suggested Grouping

Pairs or small groups of 3 to 4

Materials Needed for Each Group

(*Materials provided in curriculum)

- Writing utensils
- Flip chart paper (one piece per group)
- *Health assessment journals
- *Dog disease information sheet
- *Health assessment checklist

Getting Ready

 Photocopy enough health assessment journals, dog disease information sheets, and health assessment checklists for the groups.

Opening Questions

Ask the youth to respond to each question below by sharing their ideas verbally and/or by recording them on the flip chart paper provided.

- **1.** What are some ways you can tell when you are sick?
- 2. What signs might your parents, teacher, friends, or doctor use to recognize that you are sick?
- 3. What are some things you can do to avoid becoming sick?
- **4.** If your animal is sick, what are some changes you might notice about him or her?
- 5. What are some of the responsibilities you have to keep help your pet or project animal healthy?

Procedure (Experiencing)

• Volunteer Tip: Set up the following scenario for the youth: The youth in each group will be playing the role of a dog owner. Each group will receive one of the health assessment journals, one day at a time. As a group, the youth will go through the journal entry of each specific day and record important facts onto the health assessment checklist they have been given. At the end, using the checklists they have made,

they will compare their findings with the dog disease information and draw a conclusion regarding what disease, if any, their dog has.

- **1.** Give each group of dog owners Journal Entry 1 from their health assessment journal. The group should read the entry and record important findings on their health assessment checklist.
- **2.** When the groups have completed Journal Entry 1, take away that journal entry and give them Journal Entry 2. Have them read the entry and record important findings on their checklist.
- 3. Continue this pattern for the remaining days until each journal entry has been assessed.
- 4. When the group is done with the last day, remove this entry and pass out the dog disease information sheet. Have the groups review the data they recorded on their health assessment checklist and record their diagnosis of their dog's symptoms along with the reasons why they chose that diagnosis.

Sharing, Processing, and Generalizing

Have each group share their diagnosis and indicate which parts of their checklist helped them make that determination. 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, such as the following. Ask the youth to respond to each question below by sharing their ideas verbally and/or by recording them on the flip chart paper provided.

- **1.** What might be some advantages to keeping a daily health assessment journal for your dog?
- 2. What are some examples of the symptoms you used to tell you when to be concerned with your dog's health?
- **3.** What do you think might happen if you ignored those symptoms and didn't seek veterinary care for your dog?

3

Dog Disease Diagnosis Key

- Rae: food allergy
- Max: parvovirus
- Allie: Lyme Disease
- Sir James: bloat

Concept and Term Introduction

Volunteers need to ensure that the concepts and terms **bacterium, carnivore, fungus, inflammation, parasite, veterinarian, virus,** and **zoonotic diseases** have been introduced.

• Note: The goal is to have the youth develop these concepts through their exploration and define the terms using their own words.

Concept Application

An application for these skills is presented in Activity 2 of this unit. Youth who own a dog may apply Activity 2 to their own pet, while youth who do not own a dog may seek permission from a friend or family member to use their dog in this exercise.

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HEALTH ASSESSMENT JOURNALS

Journal 1

Dog Name: Rae Breed: Golden Retriever Gender: Female Age: 2 years



Joe Sullivan http://www.flickr.com/photos/skycaptaintwo/107048361/

Journal Entry 1

Rae woke me up this morning by jumping on my bed and licking my face. She seemed really happy and bounced around until I got up to feed her. She gobbled down her food. When she had finished I took her on her morning walk. It was cold this morning, but the sun was shining and Rae's fur looked especially golden in the light. I let her run around and sniff the trees. After she relieved herself, I picked up after her and we went back home. When we got there I checked her feet and fur to make sure she hadn't gotten any thorns or brambles caught on her. Then she drank some fresh water and laid down on the carpet for her morning nap. Before I headed off to school I took a look at her eyes and ears to make sure they were clean. Everything looked good. I also took her heart rate, which was 90 beats per minute, and her respiration rate, which was 12 breaths per minute.

When I got home from school, Rae greeted me at the door with a big wet tongue. She gets so excited to see me even though I'm only gone a few hours. I took Rae on her afternoon walk to the park and played some ball with her. Her coat shimmered as she ran. She seemed pretty happy playing with me. When we got home I checked her paws and coat again and found nothing. Her eyes were bright and shiny as she begged for her dinner. When I fed her, she gulped down her meal and drank some water. Then she napped by my desk while I did my homework. While I was working, I noticed that she would lick her front paws every once in a while. Before I went to sleep, I checked her paws again for thorns, in case I missed something before, but there was nothing in them. Maybe she was just bored.

Dog Name: Rae Breed: Golden Retriever Gender: Female Age: 2 years



.... IS YOUR DOG FEELING DOWN?

Joe Sullivan http://www.flickr.com/photos/skycaptaintwo/107048361/

Journal Entry 2

Rae woke me up as usual this morning. I really didn't want to get out of bed, but that cold wet nose kept nudging me. I fed Rae her breakfast, and she wolfed it down. When we went out on our morning walk, she ran around like she always does, but she stopped a couple times to scratch herself. I figured she probably just had an itch. Once she went to the bathroom, I cleaned up after her and we headed home. When I gave her fresh water, she drank it and lay down. Then I checked her for any brambles. There was nothing in her fur, but I noticed that the fur around her paws seemed a little discolored; it was a little reddish-brownish. Her eyes and ears still looked clear though.

When I got home from school, Rae ran to greet me at the door. She seemed excited when I first walked in, but after, she seemed to lose interest in me and started chewing on her paws. I tried to get her to stop, but she seemed pretty focused. She eventually stopped and I got her ready to go on her afternoon walk. We played ball like we usually do, but a couple times Rae completely lost interest in the ball and started scratching herself. She's normally completely focused on the ball. It's sometimes even hard for me to get it from her to throw it. When we got home, I checked her coat extra carefully, but there was nothing in it. I think her eyes looked a little more dull than normal too. I gave her dinner and fresh water, which she ate and drank, but then she started chewing on her paws again. I checked her heart rate and it was 99 beats per minute and her respiration rate was about 14 breaths per minute.

Dog Name: Rae Breed: Golden Retriever Gender: Female Age: 2 years



Joe Sullivan http://www.flickr.com/photos/skycaptaintwo/107048361/

Journal Entry 3

Today, Rae woke me, but she didn't seem as insistent as usual. She just nudged me a couple times then disappeared out of the room. My mom was making me pancakes, so maybe Rae was just trying to get some scraps. The fur on her paws was wet and matted and she had a wet, matted spot on her side as well. She ate all her breakfast. She didn't seem as excited to go on her walk as she usually does, and while we were out there she started eating some grass. When I cleaned up her feces, it seemed a little softer than usual, but I was able to clean it all up. I was running late this morning and wasn't able to do as thorough a check on her as usual, but I gave her water and headed off to school.

When I got home from school today, Rae greeted me, but then immediately started chewing on her side. I noticed that she was missing some fur on her left side and that the fur on her front right paw was very wet and matted. I decided to check her ears before the walk since I hadn't this morning, and there was some dark gunk in them. During our walk she stopped to scratch herself several times and ate some grass. I tried to throw the ball for her, but she didn't seem interested. I was able to get her to run around a little bit though, but I noticed her coat didn't seem to shine like it usually does. I checked her fur when we got home, and I noticed a small patch of reddish skin on her left side. When I gave Rae her dinner, she ate it more slowly than usual, but she still ate all of it.

Dog Name: Rae Breed: Golden Retriever Gender: Female Age: 2 years



Joe Sullivan http://www.flickr.com/photos/skycaptaintwo/107048361/

Journal Entry 4

This morning Rae didn't even come in to wake me. I found her in the living room chewing on her paws again. Now she has clear bald patches around her paws and on the sides of her back. I don't know what to do to get her to stop chewing. After she finished her breakfast, we started our walk. She was really distracted today. She kept stopping and eating grass on the way to the park we walk to. When she defecated, it was much softer than usual, which made it hard to pick up. On our way home she threw up her entire breakfast. When we got home I took a good look at her ears and eyes again. There was more black stuff in her ears that I tried to clean out with a tissue, and her eyes were draining some fluid. I gave her fresh water and some extra food, but she didn't seem to want to eat it.

Today when I got home, Rae didn't greet me at the door. I found her in the living room again licking her paws. When she saw me, she got up to come lick me, but she didn't seem very excited. Her bald patches were all red from her chewing. I think she might even be breaking the skin a little because they look pretty raw. I tried to take her on her evening walk, but she kept stopping to eat grass. She eventually vomited again, but the only thing that came up was the grass she'd just eaten. I took her straight home and gave her dinner, hoping that maybe some food would settle her stomach. She ate most of it, but left some in her bowl uneaten. There seemed to be more liquid draining from her eyes and more black stuff in her ears. She was panting and her respiration rate was about 26 breaths per minute. Her heart rate was about 105 beats per minute.

Dog Name: Rae Breed: Golden Retriever Gender: Female Age: 2 years



Joe Sullivan http://www.flickr.com/photos/skycaptaintwo/107048361/

Journal Entry 5

This morning, Rae's bald patches were even worse! They were still all red, but now there was pus coming out of them as well. The food from last night was still in her bowl, but she did eat her breakfast when I gave her new food. I think she was hungry after not having much to eat yesterday. After she ate we started our walk. I tried to prevent her from eating the grass today because I didn't want her vomiting again. Before we even got to the park she had diarrhea. I cleaned up as much as I could and took her home. She looked pretty unhappy when we got home and wouldn't even drink any water. Her coat looked really dingy and scraggly with the bald patches. I still couldn't find anything in her coat or paws to explain the chewing. Before I left for school I noticed her rubbing her ears and eyes with her paws.

When I got home from school Rae looked miserable. She didn't greet me when I walked in and just kept rubbing her eyes and ears with her paws. She didn't even want to go on her walk! There was pus around her eyes and more black stuff in her ears. I tried to feed her, but she just threw it up again. What could be wrong with her?

Dog Name: Max Breed: German Shepherd Gender: Male Age: 4 months



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Marilyn Peddle http://www.flickr.com/photos/marilynjane/2840777824/

Journal Entry 1

First thing this morning I woke up and let Max out of his kennel. We have to keep him in a kennel at night until he's trustworthy in the house, so I have to take him outside first thing in the morning. He was really excited when I let him out. He jumped up and licked my face. I checked his eyes and ears and they both looked clean. His nose was wet and cool. We went into the backyard and Max urinated and defecated. I cleaned up after him and took him inside to give him breakfast. He wolfed down his meal and was ready to play. We played tug-o-war for fifteen minutes and then I had to put Max back in his kennel while I went to school.

As soon as I got home from school, I let Max out of his kennel and took him outside to go to the bathroom. Then I put on his leash and took him on a walk to the park down the street. There are always other dogs there, but I usually don't let Max play with them because he hasn't had all of his shots yet. We were there about a half hour while Max romped around and found rocks and stuff to chew on. Then we went home and I fed Max his dinner and gave him fresh water. He was breathing pretty hard (respiration rate was 30 breaths per minute) when we got home, but he calmed down pretty quick. After he ate I brushed him for a little bit because with his thick fur he sheds so much if I don't. He seemed really happy today. Iournal 2

Dog Name: Max **Breed: German Shepherd** Gender: Male Age: 4 months



Marilyn Peddle http://www.flickr.com/photos/marilynjane/2840777824/

Journal Entry 2

I woke up this morning and took Max out to the back yard to relieve himself. He was really bouncy when I opened up the kennel and almost knocked me over. He's growing really fast these days and I don't think he realizes how big he's getting. While we were in the backyard there was a strange sound and Max perked up his ears to listen to it. He's going to make a good guard dog when he gets older. I checked his eyes and they were clear and a little watery, his ears were clean and pink inside. His nose was wet and cool. I brought him back inside and fed him his breakfast. He ate quickly and drank some water. After he ate, I played with him until I had to leave for school.

After school, I let Max out of his kennel and took him outside to relieve himself. I picked up his feces, and then it was time for Max's walk. I remembered to bring a tennis ball today so Max would have something of his own to play with. I threw the ball for him for a little while, but he hasn't figured out that he has to bring it back yet. We had to cut the walk a líttle short today because it looked like rain. When we got home I fed Max and filled his water bowl. He ran around the house after he ate because he still had a lot of energy. I took his heart rate and it was about 110 beats per minute and his respiration rate was 28 breaths per minute. I finally calmed him down by bedtime, and he fell asleep in his kennel.

Dog Name: Max **Breed: German Shepherd** Gender: Male Age: 4 months



Marilyn Peddle http://www.flickr.com/photos/marilynjane/2840777824/

Journal Entry 3

Max was wound up this morning when I took him out of his kennel. He relieved himself pretty quick and we headed back inside. Before I fed him, I noticed Max coughing a couple times. He was probably excited about getting his breakfast. He gulped down his breakfast quickly and was ready to play. We played tug-o-war for a little bit before I put him back into his kennel so I could finish getting ready for school. He was in his kenned almost twenty minutes before I left for school but he was still breathing pretty hard. His respiration rate was about 33 breaths per minute. I guess I must have really tired him out this morning.

This afternoon Max seemed a little distracted when I let him out of his kennel. While we were outside he had some diarrhea that I tried my best to clean up. I thought maybe he'd feel better after we played at the park for a while. This time I didn't bring a ball, so we just ran around together. We were there about fifteen minutes before we got tired and headed home. By the time we got home he was breathing really hard his respiration rate was about 35 breaths per minute. I decided to get him fresh water first because his tongue was hanging really far out of his mouth. His nose also seemed to be warm and dry. He drank all the water I gave him and I had to refill the bowl a second time before he had had enough. Once he had had enough water, I gave him his dinner, which he ate right up. When I brushed him after dinner, I noticed that his eyes seemed a little dull. Because he was so tired after our walk, I decided to put him to bed early. He didn't seem to mind going in his kennel early and just kind of went to sleep.

Dog Name: Max **Breed: German Shepherd** Gender: Male Age: 4 months



Marilyn Peddle http://www.flickr.com/photos/marilynjane/2840777824/

Journal Entry 4

This morning, Max seemed more tired than usual. He had drunk all of his water during the night, and when I gave him more, he gulped that down as well. He had díarrhea again when I took him outside. After I gave Max his breakfast, I took him back outside to make sure he didn't need to relieve himself again. While we were out there he started eating grass. I took him back inside and gave him some more water. He started coughing while he was drinking the water. After he was done, I played with him for a couple minutes and put him back in his kenned. I sat with him and pet his fur. He was breathing hard and his ears were very warm to the touch.

When I let Max out of the kennel this afternoon he didn't seem very happy. I took him outside and he relieved himself. This time his feces were less like diarrhea though. I took him for his walk, but we were barely to the park before he was panting. I only stayed at the park with him for ten minutes because I didn't want him to get too tired. By the time we got home, Max was coughing as well as panting. It seemed like he couldn't catch his breath. His respiration rate was almost 40 breaths per minute. I gave him water, which he lapped right up, and fed him his dinner. I decided to put him right back into his kennel after he ate so that he'd rest. I petted his fur and rubbed his ears, which he loves. His ears seemed very warm again. It took more than a half an hour until his breathing returned to normal, but he eventually calmed down and went to sleep.

Dog Name: Max Breed: German Shepherd Gender: Male Age: 4 months



Marilyn Peddle http://www.flickr.com/photos/marilynjane/2840777824/

Journal Entry 5

When I went to let Max out of his kennel this morning, I found that he had had diarrhea in his kennel. I fed him his breakfast while I cleaned it out. After he ate I took him into the backyard. He just kind of walked around for a while. I thought maybe he didn't have to go because of his accident during the night, but I waited out there with him just in case. I was almost ready to take him back inside when he vomited up his breakfast. I didn't want him to be hungry all day, so I gave him a little more food and some fresh water. Then I put him back into his cleaned kennel and headed off to school.

After school I came home to see if Max was feeling any better. I was happy to see that he hadn't had another accident in his kennel, but when I took him outside he had more diarrhea. When I was cleaning it up, it looked like there was some blood in it. I tried to look more closely at Max to see if I could tell what was wrong with him. His nose and face felt really warm touch and his eyes looked cloudy. When I felt his chest, it seemed like his heart was beating really fast. I took his heart rate and it was 130 beats per minute.

Dog Name: Allie Breed: Labrador Retriever Gender: Female Age: 5 years



Petr Kratochvil http://www.publicdomainpictures.net/view-image.php?image=249

Journal Entry 1

First thing this morning I got up and fed Allie. Then she ran around the house while I got her leash ready for her walk. We live near a nature preserve, so I always take Allie on walks there because she can run around off leash safely. There's also a small lake she likes to go swimming in when the weather is warm. When we got there, I let her go run around. It was a little too cold to let her go into the water, but she ran around happily sniffing the trees. Her coat looked nice and shiny as she ran. For a big dog, she can run pretty fast. When we got home I got her some water and checked her coat for burrs and ticks. She occasionally gets ticks when we go out there, so I check her every time we go to make sure they get removed. I didn't find anything today though.

After school I came home to take Allie on her afternoon walk. It was a little warmer, so I let her go into the water. I even threw a ball in there for her to fetch. She loves playing fetch, especially when I have her swim to get the ball. While we were out there, she relieved herself, and I cleaned up after her. When we got home I gave her more water and her dinner, which she ate right up. She gets pretty hungry after we go on our walks. Then I checked her coat again. It was shiny and smooth. Then Allie sat with me while I did my homework. It noticed that her respiration rate was at 12 breaths per minute. We played a little more after I finished. She always has so much energy. Then it was time for bed.

Dog Name: Allie Breed: Labrador Retriever Gender: Female Age: 5 years



Petr Kratochvil http://www.publicdomainpictures.net/view-image.php?image=249

Journal Entry 2

This morning I got up and fed Allie her breakfast as usual. She ate quickly and was ready for her walk. We played for a while. After she went to the bathroom, I picked up after her and we were ready to head home. After I gave her some water I was checking her coat and I found a tick. It looked like it might have been there a while because it was pretty big. I got my mom, and she helped me remove it from Allie's shoulder. I checked the rest of her coat and it looked shiny and clean. Her eyes were clear, but there was some black discharge in the corner of her left eye. Her nose was wet and cool.

By the time I got home, Allie was all ready for her afternoon walk. I decided not to have her go into the water because she gets so dirty. I don't think she minded though, she seemed a little distracted today. She didn't really want to play ball much. We stayed there about 30 minutes and then headed back home. By the time we got home Allie was panting pretty hard. Her respiration rate was about 33 breaths per minute. After I gave her some water and her dinner, I went into my room to work on my homework. After 20 minutes when she hadn't joined me in there, I went to look for her. I found her sleeping in the family room. By now her respiration rate was down to 14 breaths per minute. I guess that walk must have tired her out today. When I was done with my homework I had Allie come sit with me while I watched some TV. Then it was time to go to bed.

Dog Name: Allie Breed: Labrador Retriever Gender: Female Age: 5 years



Petr Kratochvil http://www.publicdomainpictures.net/view-image.php?image=249

Journal Entry 3

This morning when I fed Allie, she didn't eat all of her food. I tried to wait to give her more time, but finally I just had to take her on her walk and let her finish her breakfast while I was at school. She seemed distracted again on our walk this morning. She was panting hard again when we got home. Her respiration rate was about 38 breaths per minute and her heart rate was about 110 beats per minute. I gave her some fresh water, which she drank up. She had some more black gunk in the corner of her left eye and a little dried mucus around her nose. Her ears were clean and pink and felt warm to the touch.

I came home after school and found Allie sleeping in the family room again. I got Allie's leash and we started our walk. When we got to the park I threw the ball for her, but Allie didn't seem to want to play. It took some coaxing but I finally got her to run around with me a little bit before we had to head home. She seemed to be limping a little bit on her left rear leg. I checked that paw for burrs or stones, but I didn't find anything. When we got home, Allie was panting pretty had again. I gave her some fresh water and checked her fur. Again there was nothing. When I went to give her food, I found she still hadn't eaten all of her breakfast. Maybe she just wasn't very hungry today. I put some more food in her bowl and she ate some of it. After she had eaten a little kibble, she went back into the living room and fell asleep.

Dog Name: Allie Breed: Labrador Retriever Gender: Female Age: 5 years



Petr Kratochvil http://www.publicdomainpictures.net/view-image.php?image=249

Journal Entry 4

The next morning, Allie didn't seem to want to get up. I was trying to tell her that I was going to give her breakfast, so she needed to come eat it. She finally did get up, but as she walked over to her bowl she seemed really stiff. She ate some of her food, and then I tried to take her on her walk. I figured since she didn't really seem to want to walk, we'd just go out until she relieved herself. After she did, we headed straight home. When I was checking her coat, I didn't find any ticks, but it seemed like her paws and legs were a little bit swollen. I let her go back to sleep and headed off to school after giving her some water.

When I got home, Allie was sleeping again. When I woke her, she didn't really want to get up again. I finally got her up to take her on her walk. She looked pretty stiff again. I was waiting for her to go to the bathroom, but she seemed to be having trouble urinating. It took a while, but she finally did, and we headed home. By the time we got home, it looked like she was limping a little bit. I gave her fresh water and some food. She hadn't eaten all of her breakfast, but she at least had eaten some. She ate a little more, then went back into the family room to lie down. I sat with her and stroked her ears, they seemed very warm to me and I noticed that her nose was warm and dry. She was breathing heavily even though she was resting and her respiration rate was 28 breaths per minute.

Dog Name: Allie Breed: Labrador Retriever Gender: Female Age: 5 years



Petr Kratochvil http://www.publicdomainpictures.net/view-image.php?image=249

Journal Entry 5

The next day when I got Allie up she was definitely limping as she walked over to her food, but it was hard to tell what leg she was favoring. It almost seemed like she was trying not to have to take steps at all. I gave her breakfast but she only ate about two kibble bits before she got bored of it. I took her outside just in front of our house just so she could relieve herself. She couldn't seem to go, she paced around and squatted a few times, but nothing happened. I brought her back inside and told my mom that she might have to go while I'm at school.

When I got home Allie looked miserable. She didn't want to get up and she hadn't eaten any more of her breakfast. When she finally was able to get up she looked like she could hardly walk. I took her outside again, but she had more trouble urinating. Her ears and nose were very warm and she was whimpering a little. I think there's something really wrong with her. What could it be?

Dog Name: Sir James Breed: Beagle Gender: Male Age: 8 years



Melanie B. "platinumblondelife" http://www.flickr.com/photos/platinumblondelife5/82171647/

Journal Entry 1

Today is the big day, moving day! We all got up early to start moving things into the new house. Sir James was really excited. He was very alert, barking at the movers and running around the house and outside. At one point, he almost caused my dad to trip, so I had to tie him to a tree outside. He continuously barked until he got tired and fell asleep under the shade. During the lunch break, I sat next to him and checked his eyes, ears, mouth and nose. His eyes were clear, but a little watery and his nose was a little dirty. His ears looked clean and pink inside. His fur was soft and smooth and his tongue was pink and slobbery!

It wasn't until dark when we finished moving all our stuff into the new house. Once Sir James got into the house, he was all over the place, sniffing everything and getting used to the new house. I fed him a big dish of food and gave him lots of water for being so good today. Then I let him sit on my lap while I brushed him. While he was resting I took his heart rate, which was 95 beats per minute, and counted his respirations, which were about 14 per minute. As I was petting him, he fell asleep. This must have been a very tiresome day for him because this was the first time he has ever experienced moving into a new home.

Dog Name: Sir James **Breed: Beagle** Gender: Male Age: 8 years



Melanie B. "platinumblondelife" http://www.flickr.com/photos/platinumblondelife5/82171647/

Journal Entry 2

Today I started unpacking and organizing my room. Sir James still seemed very excited and curious about his new home. He would wander around the house and in and out my room. When he got tired, he would flop on his bed and take a little nap. When he woke up, he would be alert again and start wandering the house again. I felt bad for him so I gave him extra treats and a big rawhide bone to chew. That calmed him down a bit. He had a little bit of black discharge around his left eye that I cleaned off with a tissue, and his nose was wet and cool. His ears were clean and pink, and his coat was smooth and shiny.

After feeding Sir James dinner and refilling his water, I sat down with him and starting petting him. I was a little worried about him due to all the excitement that happened the past day so I did a little mini-examination to see if everything was OK. His heart rate was at 88 beats per minute, and his respíratíon rate was at 18. He seemed pretty happy to be in our new home and really liked the big bone I gave him...he ate the whole thing!

Dog Name: Sir James Breed: Beagle Gender: Male Age: 8 years



Melanie B. "platinumblondelife" http://www.flickr.com/photos/platinumblondelife5/82171647/

Journal Entry 3

Today was the first day of school. While I was getting ready for school, Sir James was still asleep. When I went to say goodbye, he looked so peaceful I decided not to wake him up. However, I noticed that he was wheezing a little. Before leaving, I made sure he had a nice full bowl of food and water.

When I got home, Sir James was really excited to see me and greeted me at the door. I set my backpack down and gave him a good rubdown. When I went to scratch his stomach, it looked like his stomach was a little bigger than normal. His eyes, ears, nose, and coat all seemed fine, though. Then I looked over at the food and water bowl and it was empty! Oops, I think that with all of the extra treats I might have fed him too much. Sir James seems to be getting fat. I will cut down his food portions for dinner. I got up and started doing my homework. While doing my homework, Sir James kept pacing back and forth in the living room. He didn't want to lie down in his bed. I couldn't take his heart rate, but his respirations were at about 21 breaths per minute. I didn't hear any more of the wheezing from this morning. Maybe he had just been snoring!

Dog Name: Sir James Breed: Beagle Gender: Male Age: 8 years



Melanie B. "platinumblondelife" http://www.flickr.com/photos/platinumblondelife5/82171647/

Journal Entry 4

This morning my mom reminded me to walk Sir James. Since we moved, I forgot to walk him! So this morning, I took him on a little walk before going to school. While walking, I noticed his stomach still looked a little big. We only walked around the block but when we were done, he was breathing heavily. His respiration rate was about 25 breaths per minute, and his heart rate was 110 beats per minute. When we got home, I put a little food in his food bowl and refilled his water. I went to say goodbye to Sir James before going to school.

When I got home after soccer practice, Sir James greeted me at the door but didn't seem very excited to see me. I gave him his dinner, and he only took a couple of bites before leaving his food alone. About an hour later, I took him for another walk to make up for the time I forgot to take him out. He didn't seem in the mood to go out but I eventually got him to go. It took a really long time to get around the block this time. He seemed to be breathing very heavily, so I walked slower. His stomach didn't look smaller from this morning. However, his eyes, ears and nose were still clear.

Dog Name: Sir James Breed: Beagle Gender: Male Age: 8 years



Melanie B. "platinumblondelife" http://www.flickr.com/photos/platinumblondelife5/82171647/

Journal Entry 5

This morning I was woken up by Sir James's heavy breathing. When I tried to get him up to go for a walk, he was very hesitant to move. Eventually he got up and slowly walked to the door. His stomach looked a little bigger. While walking, at one point it looked like he was going to throw up, but he didn't. I was worried about him, so we turned back after only walking a quarter of the way. When I got back home, he went straight for his bed, plopped down, and slept. His heart rate was 80, and his respiration rate was 22.

When I got back home, Sir James wasn't there to greet me at the door. I looked for him around the house and found him in his bed. He was curled up in a ball, moaning and breathing heavily. I tried to get him out of his bed but when I touched his stomach, he pulled back and whimpered. I noticed that it was even bigger than this morning. At this point, I was really worried so I called my parents at work to let them know that something was wrong with Sir James.

DOG DISEASE INFORMATION SHEET

Bloat

Bloat is the common term for gastric dilation-volvulus. This condition involves the swelling of the stomach from gas, fluid, or both, and is often associated with a rotation of the stomach.

It is still unknown precisely what causes bloat, but it often has to due with a stress of some sort. Symptoms can be subtle, but occurrence of bloat is a veterinary emergency. If not treated immediately, death is very likely, but dogs that are treated quickly have a very good survival rate. Bloat is also often misdiagnosed as a simple stomach ache.

Though it is not exclusive to any breeds in particular, it is more common in dogs with large, deep chests. Preventative measures include feeding smaller meals multiple times per day and limiting water intake and activity immediately after feeding. Symptoms of bloat may include

- distended abdomen
- difficulty breathing
- moaning
- abdomen sensitive to touch
- dry heaves or retching
- pacing

Food Allergies

Itchy skin in dogs is often more than a minor annoyance. Just like humans, animals can suffer from a wide variety of allergies. Most food allergies are related to meat, eggs, corn, and soy, which are foods high in protein. Proteins in the diet are sometimes recognized by the immune system as foreign invaders to be attacked. The resulting inflammation may target the intestinal tract or other organ systems, but in dogs it is the skin that most often suffers. As opposed to weather-related allergies, food allergies will continue throughout the year. Symptoms of food allergies may include

- facial itching
- foot or limb chewing
- abdominal itching
- recurrent ear problems
- bald patches

- rashes and/or puss on skin
- vomiting
- diarrhea

Parvovirus

Canine parvovirus is a deadly disease that affects all members of the canine family, including wolves and coyotes. Usually this disease is found only in puppies. The most common form of transmission is ingestion of fecal material from an infected dog.

The best prevention of parvovirus is vaccination. Puppies are given the vaccine every 2 to 4 weeks until the puppy is 16 weeks of age. Most adult dogs continue to be immune to this disease. Typically, adult dogs are vaccinated yearly. Symptoms of parvovirus may include

- fever
- anorexia
- bloody diarrhea
- dehydration
- respiratory distress
- decrease in numbers of white blood cells

Lyme disease

Dogs get Lyme disease when deer ticks pass bacteria into the dog's bloodstream when they bite. The tick must remain attached to the animal's skin for at least 1 day before the bacteria can be transmitted. Quick removal of the tick can lessen the chances of transmission of the disease.

Treatment involves the use of an appropriate antibiotic for at least 3 to 4 weeks. Dogs should begin to show signs of recovery 2 to 3 days after beginning treatment. However, the disease may recur within a few weeks or months; in these cases, the dog will need to return to antibiotic therapy for extended periods. Symptoms of Lyme disease may include

- loss of appetite
- fever and lethargy
- lameness
- skin or kidney problems
- joint problems or inflammation
- heart problems

HEALTH A	ASSESS MENT CHECKLIST
Dog Name:	Breed:
Gender:	Age:
General Symptoms	
Is there anything you notice that you should be	concerned about?
Journal Entry 1:	
Journal Entry 2:	
Journal Entry 4:	
Journal Entry 5:	

Suspected Diagnosis: _____

(Use the dog disease information sheet)

Observations

Explain which symptoms from the above journal helped you indicate a problem, and explain why.

What other observations do you think might be important?

Why do you think recording daily observations of your dog would be helpful in monitoring your dog's health?

Your Dog's Health

Subject Overview and Background Information

Youth should use the skills and knowledge acquired from the previous activity to assess their dog's health in this application activity. As important as it is to teach the youth about animal health assessments, it is even more vital for the youth to apply their knowledge in the real world. This application activity allows the youth with animals to evaluate their pets' health and determine the right time to consult a veterinarian. The youth should be in a regular habit of checking their animal's overall health and notice any signs of abnormality.

The best way to assess the health of a dog is through observation. There is no clear-cut definition of what is normal; normal varies from dog to dog, so abnormal depends on your dog as well. Observing your dog daily is the best way to really get to know it and to be able to identify changes that might be symptoms of disease or injury.

In this activity, youth will fill out the health assessment charts used in the previous activity, except that they will make observations on their own dogs. In addition, they should write a short journal entry on the back of the chart about what they did with their dog daily. The daily observations should last a minimum of 14 days.

Dogs can be difficult animals to handle and to take vital measurements from. We suggest developing an inexpensive kit that may help the youth in their observation and measuring process. This kit could include the following:

- Latex gloves: for general use every time they examine the dog, especially when they make personal contact with sensitive areas of the dog. Wearing disposable gloves is highly recommended when performing any of these procedures to prevent the spread of disease from human to dog and vice versa.
- Penlight: for use when examining the dog's eyes and nostrils. Encourage the youth to note anything that looks abnormal in these areas and compare this with observations from previous days.
- Magnifying glass: for use when looking at the dog's coat. The youth can look closely at the skin and coat and note any interesting observations.

Checking a dog's vitals is important in order to assess its health. Before checking the dog's vitals, make sure the vouth understand how to take each of these measurements.

- Respiration (breathing) rate: Get your dog in a comfortable position and watch its chest move in and out as it breathes. One breath is equivalent to the dog's chest moving in and out once. Count how many breaths the dog takes in 1 minute; or count the number of breaths it takes in 15 seconds (using a stopwatch or watch with minute hand) and multiply the number by 4 to get the number of breaths in 1 minute. If you have a hard time watching your dog breathe in and out, you can put a tissue or mirror by your dog's nose and watch for tissue movement or fog on the mirror. The normal respiration rate for dogs is from 10 to 30 breaths in 1 minute. Contact your veterinarian if your dog's respiration rate is out of this normal range.
 - Note: Make sure to count your dog's respirations when it is resting and not immediately after exercise or when it is excited.
- Heart rate: Stand over your dog with its head facing away from you. Gently place both hands on its ribs just below its elbows. Move your hands around its ribs until you feel its heartbeat (pulse) easily. A stethoscope can also be used in place of your hands. Count the number of beats in 1 minute; or count the number of beats in 15 seconds and multiply by 4 (or count for 30 seconds and multiply by 2). Other areas where you can check your dog's pulse are on the sides of its neck, on the inner thighs of its hind legs, and on its lower front legs (equivalent to your wrists).
 - It is important to note that the normal heart rate of dogs depends on the breed and cardiovascular fitness.
 - Large-breed dogs (breeds over 50 pounds): 70 to 120 beats per minute.
 - Medium dogs (breeds weighing 25 to 50 pounds): 80 to 120 beats per minute.
 - Small dogs (breeds between 10 and 25 pounds): 90 to 140 beats per minute.
 - Toy dogs (breeds under ten pounds): 100 to 160 beats per minute.
 - Puppies: 180 beats per minute.

The growth of a puppy can be measured in addition to its heart rate and respiration rate. Use a tape measure to measure the dog's height by measuring from its shoulder to the floor. A dog's girth (width) can be measured by pulling the measuring tape around the widest part of the dog. The dog's length can be measured from the tip of its nose to the base of its tail.

The penlight and magnifying glass can be used to get a closer look at any part of the dog. Youth can make complete observations by looking at the ears, eyes, and the mouth with the light. Do not flash the light directly in the dog's eyes; rather, pass the light back and forth slowly and steadily acress the eyes. **Do not substitute a laser pointer for the light**. The magnifying glass allows youth to take a closer look at the skin and coat, as well as any abnormalities in the dog's ears and mouth.

It is important to let the youth know that they should not make immediate conclusions about their animal's health. Most of the youth will probably have perfectly healthy pets. Do not give them the impression that they must find something wrong with their animal. Emphasize the concept of **health care maintenance** rather than health diagnosis.

Working with animals can get dirty, so appropriate clothing is required (new clothes are not recommended). Make sure the clothes and shoes are comfortable so that the youth can move around and work in them. The recommended dress includes

- closed-toed shoes
- long pants
- long-sleeved shirt
- a tie for long hair, if necessary
- no free-hanging earrings
- secure glasses

When outdoors with dogs, sun protection is recommended, such as sunscreen and a hat and sunglasses. A painter's mask may be needed by those who are asthmatic, sensitive, or allergic to dust and small particles in the air.

Activity Concepts and Vocabulary

• **Health care maintenance:** The regular monitoring of an animal's health.

Life Skills

- **Head**: Keeping records, problem solving, decision making, critical thinking
- **Heart**: Sharing, communication, concern for others, empathy
- Hands: Self-motivation
- **Health**: Disease prevention, self responsibility, personal safety

Subject Links

Science and Language Arts

State Content Standards

Science

- Third Grade
 - Investigation and Experimentation: 5e
- Fourth Grade
 - Investigation and Experimentation: 6c
- Fifth Grade
 - Investigation and Experimentation: 6h, 6i
- Sixth Grade
 - Investigation and Experimentation: 7d

Language Arts

- Fourth Grade
 - Listening and Speaking Strategies: 1.7
- Fifth Grade
 - Listening and Speaking Strategies: 1.5
- Sixth Grade
 - Listening and Speaking Strategies: 1.5

Purpose of Activity

The purpose of this activity is to have youth record observations of their own dog over a period of time.

ACTIVITY **Q** Dog Health Journal

Overview of the Activity



Youth will have the opportunity to assess the health of their dog for a minimum of 14 days. They will make observations of their animal and record what they observed for each day. They will

also write a journal entry each day on their animal's activity. During their group meetings, youth will have a chance to share their observations of their animal and discuss any potential diseases or illnesses with their group.

Time Required

Approximately 15 minutes daily for at least 2 weeks

♦ Suggested Grouping

Individual

♦ Materials Needed for Each Youth

(*Materials provided in curriculum)

- Flip chart paper
- *Animal health journal:
 - Animal background information sheet
 - Animal health daily recording sheets for each day of observation
- Health assessment kit:
 - Latex (disposable) gloves
 - Penlight
 - Magnifying glass
- Writing tool (pencil, pen, etc.)
- Stopwatch or watch with second hand
- Disinfectant (for cleaning hands)
- Stethoscope
- Painter's mask (if sensitive or allergic)
- Tape measure

Getting Ready

Each individual is expected to observe their dog for 14 to 28 days. Make an animal health journal for each youth, which consists of an animal background information sheet and

one blank animal health daily recording sheet for each day the youth will observe their dog.

Opening Questions

Ask the youth to respond to each question below by sharing their ideas verbally and/or by recording them on the flip chart paper provided.

- When you are sick, what observations might your parents make that would lead them to take you to see the doctor?
- **2.** Describe what you might notice about dogs that are not feeling well.
- **3.** What kinds of observations about your dog would prompt you to call your veterinarian?
- **4.** Why might keeping a daily journal about you or your dog be helpful to a doctor or veterinarian?

Procedure (Experiencing)

- 1. Give each individual an animal health journal packet, which includes the animal background information sheet and one animal health daily recording sheet for each day of observation.
- Review the terms on the checklist and how to properly take the heart rate and respiration rate. Make sure the youth know the proper dress code for working with animals.
- **3.** Explain to the youth that they are to fill out the animal background information sheet. If they have more than one animal, they may choose one to work with for this activity. They may need to work with their parents to answer the background information questions.
- 4. Youth will also fill out an animal health daily recording sheet every day for the chosen number of days (14 days are recommended). The youth should also include a brief journal entry on the back of the recording sheet, describing what they did with their animal each day.

5. Ask the youth to prepare to share a report with their peers at the next group meeting. Reports should include an oral description of observations along with any potential symptoms of illness. Youth may want to graph heart rates and respiration rates. If they have a puppy or young dog, they may want to graph growth. Youth could also create a poster or PowerPoint presentation to share their findings.

Sharing, Processing, and Generalizing

Have each youth share his or her report with the group. 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, such as:

- What are some advantages of keeping a daily health journal for your dog? Were there any challenges? Please explain.
- **2.** Did your dog present any symptoms of concern? If so, what were they, and what did you do?
- **3.** In what ways are graphs of heart rate and respiration rate helpful in assessing your dog's

health? What kind of information can you get from a growth chart? Please explain.

4. What similarities, if any, were there between your dog and others' dogs? What differences, if any, were there? Please explain.

Concept and Term Discovery/ Introduction

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 exploration and define terms using their own words.

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- eHow.com. How to check the respiratory rate of dogs and cats. eHow.com Web site, http://www.ehow.com/ how_3027_check-respiratory-rate.html.

Animal Health Journal

ANIMAL BACKGROUND INFORMATION SHEET

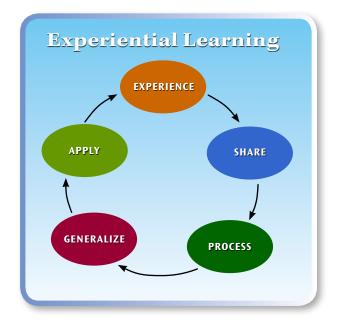
Date:	_Youth's name:	
Animal's name:	_Species:	
Breed:	_Date of birth or age of animal:	
Gender (male, female, or unknown/fixed or intact):	_Has this animal been bred?	
If yes, how many times?	_Date of last breeding?	
Health history: Is this animal on any medications?	_If yes, please list	
Does this animal have current vaccinations?		
Does this animal have any allergies?	_IT yes, please list	
Has this animal had any major illnesses or surgeries?		
Date of last veterinary checkup:	_	
Environment: Please describe the housing for this animal (indoor/outdoo	r, with other animals/alone, size of enclosure).	
Diet: Please describe the diet and the feeding schedule for this animal. Describe how water is provided (bowl, automatic waterer, etc.)		

ANIMAL HEALTH DAILY RECORDING SHEET

Date:	Time:
Animal name:	
MEASUREMENTS	
Heart rate:	_ Respiration (breathing) rate:
OBSERVATIONS	
Behavior:	
Activity level:	
Appetite:	
Body condition:	
Posture and flight:	
Skin, coat, and paws:	
Eyes:	
Ears:	
Nose:	
Body waste:	
Other:	

APPENDIX

The activities in this curriculum are designed around inquiry and experiential learning. Inquiry is a learnercentered 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 5-step learning cycle is most commonly used. These five steps-Exploration, 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 5-step learning cycle, please visit the University of California's Science, Technology, Environmental Literacy Workgroup's Experiential Learning Web site, http://www.experientiallearning.ucdavis. edu/default.shtml.

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