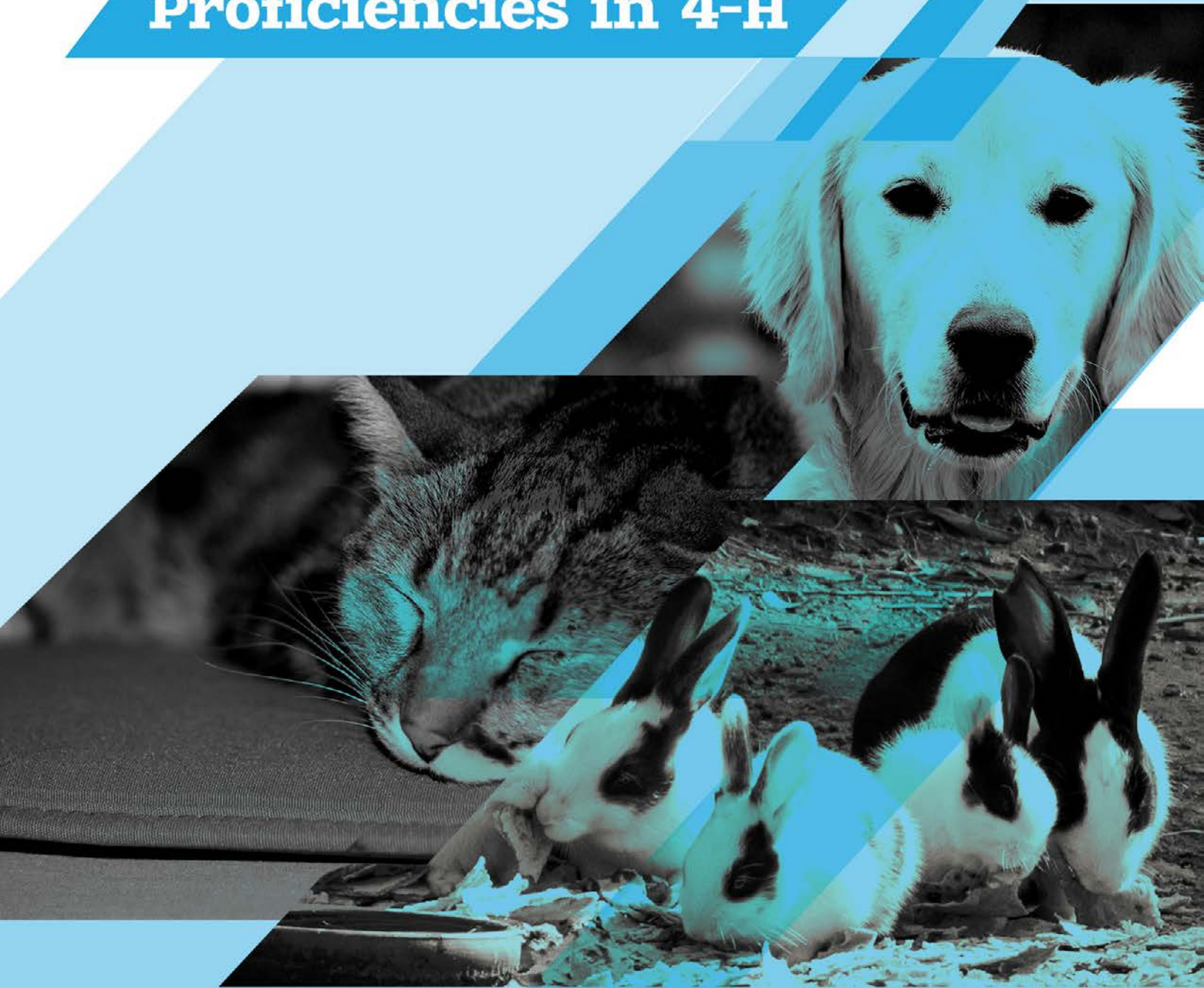


Animal Welfare Proficiencies in 4-H



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Preface

The study of animal welfare is a rapidly growing field that engages scientists and veterinarians in research that seeks to provide better understanding of the needs and experiences of animals, and strives to find balance between these and the practices of modern animal use. In addition, animal welfare is a social and cultural issue that is increasingly being incorporated into the legal and political landscapes. Due to the complex nature of the subject of animal welfare, a 4-H project that educates and supports youth in a sustained fashion is necessary. The Animal Welfare Proficiencies Program is an extended intervention where each level of proficiency builds upon previous levels, such that knowledge and skills scaffold and are integrated and enriched over time.

At the heart of the Proficiencies Project are educational activities that promote the acquisition of knowledge and skills through experiential learning. The proficiencies are structured so as to facilitate both group learning within project meetings and independent application of skills through take-home activities. The framework for the Proficiencies Series is as follows:

Introduction: Animal Welfare and Ethical Decision-Making

1. Proficiency 1: Animal Behavior
2. Proficiency 2: Animal Health
3. Proficiency 3: Animal Care
4. Proficiency 4: Human-Animal Interactions
5. Proficiency 5: Self-Assessment

Each proficiency level is defined by the following elements:

- group activities led by volunteer leader
- independent activities performed by youth
- documentation of independent work through written work, photographs, or video, as appropriate
- presentation of independent work and group reflection
- completion of Proficiency Level Checklist
- award of Proficiency Level Pin

Determination of qualification for Proficiency Awards is at the discretion of the project leader. It is recommended that leaders review the independent work submitted by each youth and evaluate for completeness and effort. We do not provide tools for grading project work, but recommend that Proficiency be awarded when youth have both attended the group meeting and demonstrated good effort on the associated independent work. Youth may be given additional time to successfully complete the requirements of achieving Proficiency as determined necessary and appropriate.

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Facilitator Tips

Teaching and Learning Strategies

All activities in the Understanding and Applying Veterinary Science in 4-H curriculum were designed using experiential learning and inquiry. Experiential learning (EL) is grounded in the idea that experience is essential to learning and understanding. Specifically, EL involves a recurring sequence of three distinct steps: 1) an experience (“Do”) that involves learner exploration; 2) a period of reflection (“Reflect”), where learners share their reactions and observations, process their experience, and make generalizations to real-life examples; and 3) an opportunity to apply (“Apply”) new knowledge and skills in an authentic manner, which helps learners deepen and broaden their understanding (it helps learning last!).

Inquiry is a teaching and learning strategy whereby learners are engaged in activities that require the observation and manipulation of objects and ideas in order to construct knowledge and develop skills. Inquiry is grounded in experience, focuses on the use and development of critical thinking skills, and targets the learning and application of specific content knowledge.

The inquiry-based activities in the Understanding and Applying Veterinary Science in 4-H curriculum were designed using the 5-step EL cycle (Pfeiffer and Jones 1983): Experience, Sharing, Processing, Generalizing, and Application. It is recommended that adequate time be allotted for youth learners to proceed through each step in order for learning to be maximized.

Organization of Learning Environment

Creating the environments where learning takes place

The activities in the Understanding and Applying Veterinary Science in 4-H curriculum were designed to be facilitated in a small group-learning environment. Learners construct understanding through inquiry, using observations, the manipulation of objects and ideas, and personal reflection. However, learning is a social endeavor where dialogue and reflection with others are critical elements. Therefore, creating physical and social environments where learners can carry out inquiry will help them organize their thoughts and develop an understanding of the content and processes being emphasized in specific curriculum activities.

Curriculum Activity Layout

- **Activity Title**

The activity title introduces the facilitator to the topic that will be addressed during the activity. A subtitle may specify the area of focus within the topic.

- **Background Information**

This introductory section provides facilitators with a brief overview of the subject matter and offers examples that help to explain why the topic is important. This section may also include brief descriptions of the sections included in each activity (e.g., concepts and vocabulary, life skills targeted, subject links to education standards, and an overview of activities).

Facilitator Tip: The background information is not meant to be shared with the youth prior to the activity. Rather, it is intended to support facilitators by providing factual information that may help ground and inform group discussions.

- **Time Required**

Each module includes an estimate of the time needed to complete the activities. The actual time required for the activities will vary based on level of learner interest, size of the group, age of the group members, and setting in which the activities take place.

Facilitator Tips

Curriculum Activity Layout (continued)

- **Learning Objectives: Concepts and Vocabulary**

Facilitators are provided with a list of defined concepts and vocabulary that represent key curriculum content that is meant to be discovered by the youth through their exploration, reflection, and discussion with others.

Facilitator Tip: The list should not be provided to the youth at the beginning of the activity. At the end of each activity, the facilitators should ensure that the appropriate terms and concepts have been discovered by or introduced to the youth.

- **Life Skills**

Life skills are abilities that help youth become productive, contributing members of society. The activities are designed to provide youth with the opportunity to practice particular life skills that are utilized in everyday life. The life skills being targeted are listed for each activity. Learn more about the Targeting Life Skills model at UC Department of Agriculture, http://www.csrees.usda.gov/nea/family/res/pdfs/Targeting_Life_Skills.pdf.

- **National Science Education Standards Supported**

The Next Generation Science Standards are guidelines for educators regarding what K-12 students should know, comprehend, and be able to do in order to be scientifically literate, competent members of society. Each activity supports at least one of the Next Generation Science Standards Crosscutting Concepts. For more information about the Next Generation Science Standards, visit Next Generation Science, <http://www.nextgenscience.org/sites/ngss/files/Appendix%20G%20-%20Crosscutting%20Concepts%20FINAL%20edited%204.10.13.pdf>.

- **Suggested Groupings**

Activities are designed for youth to work in pairs, small groups, large groups, or individually. The suggested groupings are meant to help facilitate quality learning among the youth.

- **Materials Needed**

A list of the materials needed to complete the activities is provided for the facilitator. The list describes the materials to be used, as well as how many of each item is required for each activity. Most materials are provided (these are marked with an *); however, other materials will need to be obtained by the facilitator.

- **Getting Ready**

This section describes what needs to be done by the facilitator to prepare for the activity. It is highly recommended that facilitators review this list carefully and prepare necessary materials prior to activity implementation.

Facilitator Tips

- **Opening Questions/Prompts**

Facilitator Tip: This is the point where each activity begins with the youth.

Questions or prompts presented at the beginning of each activity are meant to draw the youth into the topic being addressed in the activity. Responses to the questions will also provide the facilitator with an understanding of what the youth already know about the topic. Each question is designed to be open-ended and to support collaboration within the group. Facilitators should encourage the youth to record their answers to these introductory questions on the provided flip chart paper, as this is an important part of the learning process.

Facilitator Tip: Ask the questions/prompts as they are written. Open-ended questioning is a key element of inquiry-based learning.

- **Procedure (Experiencing)**

This is the part of the curriculum when the youth experience and complete the activity itself. It is highly recommended that facilitators review the procedure prior to implementing with youth so the activity flows smoothly from one section to another. It is important for youth to record their observations, ideas, and other thoughts during the procedure on the flip chart paper provided, as this is an important part of the learning process.

- **Sharing, Processing, and Generalizing**

Following the activity procedure there is a period of reflection, during which time the youth come back together as a large group and share their observations with each other. This is an opportunity for youth to communicate their findings, listen to what others discovered, consider the various thought processes, and learn from each other. This section helps to solidify what the youth have learned throughout the course of the activity.

- **Concept and Term Discovery/Introduction**

At this point of the activity, most of the concepts will have most likely already been discovered by the youth. Many concepts will have already been defined by now as well. However, some technical terms may need to be introduced to the youth. The facilitator needs to confirm that all important terms and concepts have been defined.

Facilitator Tip: Ensure that all terms/concepts have been discovered by or introduced to the youth. Additionally, make certain that any misconceptions have been addressed.

- **Concept Application**

The true test of understanding takes place when learners attempt to apply their new knowledge and skills to authentic situations. At this point of the activity, youth have already completed the hands-on activities that have introduced the new concepts and skills. The concept application section provides the facilitator with activities that allow youth the opportunity to take what they have learned and apply it to independent, real-world situations. This application of knowledge is a critical step of the learning process.

- **References**

Following the concept application section, the facilitator is provided with a list of references. The references list can be used as an additional resource by the facilitator to learn more information about the topics addressed during the activity.

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Introduction to Animal Welfare and Ethical Decision-Making

Background

Welfare is viewed as something intrinsic to the individual animal, i.e., the animal's state of being well or "faring" well (Broom and Johnson 1993). **Animal welfare** as a state cannot be directly measured, but has both physical and psychological components that can be evaluated by measuring physical and behavioral indicators. In addition to good physical health, a key component to good animal welfare is a positive emotional state. When people talk about animals having emotions, they are often criticized for "**anthropomorphizing**"—but the assumption that humans are the only animals with feelings is no longer considered valid, given our increased understanding of animals' biology and behavior. In fact, it has become widely accepted that nonhuman animals are capable of experiencing a wide range of both positive and negative emotions. To understand and appreciate animal welfare in context of raising animals as companions or as food animals, it is necessary to take the feelings of animals into consideration in making decisions about their treatment and care.

It is important to understand how to apply animal care practices that decrease the likelihood that animals will experience negative emotions. A framework that has been developed for this purpose is known as the "Five Freedoms." These are

1. Freedom from Hunger and Thirst by ready access to fresh water and a diet to maintain full health and vigor.
2. Freedom from Discomfort by providing an appropriate environment, including shelter and a comfortable resting area.
3. Freedom from Pain, Injury, or Disease by prevention or rapid diagnosis and treatment.
4. Freedom to Express Normal Behavior by providing sufficient space, proper facilities, and appropriate social partners.
5. Freedom from Fear and Distress by ensuring conditions and treatment that avoid mental suffering.

In addition, it is now recognized that while following animal care practices that address the Five Freedoms is important, animal caregivers must also consider how their practice can provide **positive experiences** for the animals in their care. These include opportunities to exercise, explore, play, and develop positive social relationships with human caretakers and (in social species) their own kind. Our society is rapidly shifting in its appraisal of animal care practice, which has resulted in the rejection of practices, that are considered cruel or overly intensive. In addition, increased appreciation for the role animal welfare plays in animal agriculture has led to an increase in demand for food products that are humanely raised and harvested. The topic of animal welfare is complex and worthy of study by anyone who cares for or raises animals.

Life Skills

- Head: critical thinking, decision making, service learning
- Heart: concern for others, empathy, communication
- Hands: teamwork, contributions to group effort, self motivation, community service volunteering, responsible citizenship
- Health: stress management

Next Generation Science Standards: Cross-Cutting Concepts

- Patterns
- Cause and Effect

Concepts/Vocabulary

- **Animal welfare:** Animal welfare is the animals' state of being and describes how they are feeling or "faring," both physically and psychologically.
- **Anthropomorphizing:** To attribute human characteristics or qualities to nonhuman animals.
- **Ethical framework:** An ethical framework is a way of structuring your thinking about ethical questions. An ethical framework allows a person to evaluate situations, and it guides behavior.
- **Ethical questions:** A problem or situation that requires a person to evaluate and choose between alternatives based on what is considered right (most ethical) and wrong (least ethical).
- **Positive experiences:** Opportunities for animals to interact in a constructive, enjoyable manner with humans or other animals.

1.1

Introduction Activity 1.1: Considering Emotional Responses in Humans and Nonhuman Animals

This activity is meant to be an introduction to some of the basic concepts of animal welfare that can help youth who raise animals learn to incorporate the principles of animal welfare into their animal care routines.

Getting Ready

- Gather all necessary materials (cups and colored paper).
- Make 25 red paper balls, 25 green paper balls, and 12 white paper balls for each youth. Colored pom poms or colored pony beads may also be used.
- Copy necessary Appendices for each youth (Part A); copy necessary Appendices for youth when working in pairs (Part B).

Opening Questions/ Prompts

1. Describe some feelings that you consider to be positive. Ask youth to write down their thoughts and ideas on the flip chart paper provided.
2. Describe some feelings that you consider to be negative. Ask youth to write down their thoughts and ideas on the flip chart paper provided.
3. How are the qualities of positive and negative experiences similar or different? Ask youth to write down their thoughts and ideas on the flip chart paper provided.
4. Describe how you are able to understand other people's feelings. Ask youth to write down their thoughts and ideas on the flip chart paper provided.
5. Describe how you are able to understand nonhuman animals' feelings. Ask youth to write down their thoughts and ideas on the flip chart paper provided.

Suggested Groupings

- Part A – youth will work individually;
- Part B – youth will work in pairs.

Time Required

- 45 minutes to 1 hour

Materials Needed

- clear plastic or glass cups that are 12 ounces or larger (one per youth)
- small pieces of red paper crumpled into balls (approximately 25 per youth)
- small pieces of green paper crumpled into balls (approximately 25 per youth)
- small pieces of white paper crumpled into balls (approximately 12 per youth)
- Emotion Scenarios (Appendix A) (one set)
- Human Emotion Worksheet (Appendix B) (one per youth)
- Nonhuman Emotion Worksheet (Appendix C) (one per pair)
- writing utensils (one per youth)
- flip chart paper (shared materials)

I.1

Introduction Activity I.1: Considering Emotional Responses in Humans and Nonhuman Animals

Part A: Human Emotions

Experience

1. Hand out cups, Human Emotion Worksheet (Appendix B), and writing utensils.
2. Place paper balls in the center of the tables around which the youth are sitting.
3. Explain to the youth that the red balls represent negative feelings and the green balls represent positive feelings. The white balls represent neutral feelings or no opinion.
4. Instruct youth to listen to the scenario that the facilitator/volunteer reads from the Emotion Scenarios (Appendix A) card. Based on their interpretation of the scenario, each youth should select one or two paper balls to put in their cup, according to the following key:
 - a. 2 Green = Positive Experience
 - b. 2 Red = Negative Experience
 - c. 1 Green, 1 Red = Mixed Experience
 - d. 1 White = Neutral or No Opinion
5. Have the youth record their selection in the appropriate row of the recording sheet.
6. Ask youth to identify the emotion they imagine they would experience in this scenario. They can use a single word or a phrase to describe the emotion or emotions.
7. Repeat until all six Emotion Scenarios have been read.

Sharing, Processing, and Generalizing

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

- Look at the contents of your cup and the cups of those around you. How is the distribution of red, green, and white balls similar or different? Ask youth to write down their thoughts and ideas on the flip chart paper provided.
- Choose one of the experiences and share the emotion you wrote down to describe how you would feel in that situation. Explain how your responses were similar to or different from the emotions others recorded. Ask youth to write down their thoughts and ideas on the flip chart paper provided.

1.1

Introduction Activity 1.1: Considering Emotional Responses in Humans and Nonhuman Animals

Part B: Nonhuman Animal Emotions

Getting Ready

- Have the youth form pairs.
- Each youth in the pair should have their recording sheet from Part A and their writing utensil.
- Give each pair one copy of the Nonhuman Emotion Worksheet (Appendix C) for Part B.

Experience

1. Have each pair write down each emotion they recorded on their Human Emotion Worksheet from Part A in the first column of their Nonhuman Emotion Worksheet. If the two youth had some emotions in common, they need only record that emotion once.
Facilitator Tip: If pairs of youth collectively have more than 12 unique emotions listed on their Part A worksheets, they should choose 12 to record on their Nonhuman Animal Emotion Worksheet.
2. Once the emotions are recorded, ask the pairs to work together to write a short experience that they think would cause a nonhuman animal to experience each emotion listed. Emphasize that the experiences they write should be realistic.
3. If youth cannot come up with an experience that might cause an animal to experience the emotion listed, have them describe why they were unable to do so

Sharing, Processing, and Generalizing

Follow the lines of thinking developed by the youth as they share and compare their thoughts, observations, and conclusions. If necessary, use more targeted questions as prompts to get to particular points. For example:

1. Ask each group to share two of their nonhuman animal emotion experiences. Allow others to comment on the experiences shared. Discuss the similarities and/or differences regarding the opinions expressed by others. Ask youth to write down their thoughts and ideas on the flip chart paper provided.
2. Ask youth to share if there were emotions on their list for which they could not imagine a scenario that would lead an animal to experience that emotion. Allow others to comment. Discuss the similarities and/or differences regarding the opinions expressed by others. Ask youth to write down their thoughts and ideas on the flip chart paper provided.
3. Ask the youth to describe their thoughts on the feelings of animals other than humans. Ask youth to write down their thoughts and ideas on the flipchart paper provided.
Facilitator Tip: You may inform the youth that scientists have known for several decades that animals—from humans, to pigs, to chickens, to dogs—have almost identical central nervous systems, meaning we all experience stress, fear, and pain in very similar ways. Ask youth if this information changes the way that they think about how nonhuman animals experience emotion. Ask them to explain why or why not.

Concept and Term Discovery/Introduction

At this point, it is important to ensure that the following terms/concepts have been introduced: **animal welfare, anthropomorphizing, ethical framework, ethical questions, and positive experiences.** (Note: The goal is to have the youth discover terms and concepts through their own exploration.)

1.2

Introduction Activity 1.2: Ethics of Animal Use

Background

When humans use animals for their benefit, whether through food production, scientific or medical research, entertainment, sport, or service, care must be taken to consider the impacts of these activities on both humans and the nonhuman animals involved.

In most cases, people agree that activities that cause extreme pain or suffering to nonhuman animals are not justified in cases where the benefit, or potential benefit, to humans is not significant. However, debate arises around whether treatment towards animals that causes suffering can be justified if it benefits the human population.

For example, scientific experiments on animals can, and usually do, cause them some pain and suffering, and the animals are usually killed at the end. However, experiments are done for a reason—to develop a medicine or vaccine, to test the safety of a product, or obtain scientific knowledge—all of which may be considered beneficial to human society, animals, or the environment.

Animal agriculture also involves some degree of pain or suffering on the part of the animals, ranging from issues relating to living in confined conditions to the stress involved with transportation or slaughter. However, animal agriculture provides a central source of food for humans, and, as such, improves the quality of life of those that consume animal products.

Making **ethical decisions** about animal care and use requires evaluating alternatives and drawing conclusions as to which options are considered most acceptable (ethical) and least acceptable (unethical). One way to approach ethical decision making about animal agriculture is by weighing the costs and benefits of different production practices. This process requires giving thoughtful consideration to the impacts of the activity on each of the different agents that the practice impacts. Thinking about production practices from multiple perspectives and engaging in discussions about these different points of view is a fruitful approach to aiding ethical decision making.

The goal of this activity is to engage youth in respectful conversation regarding various approaches to animal agriculture in order to allow them to formulate and express their personal **ethical framework**.

Facilitator Tip: Youth should be encouraged to share their thoughts honestly and without fear of ridicule. For additional information on the ethics of animal use in research, see Stanford website, http://web.stanford.edu/group/hopes/cgi-bin/hopes_test/animal-research/.

1.2

Introduction Activity 1.2: Ethics of Animal Use

Getting Ready

- Make copies of the Scenario sheet (Appendix D). Cut into three parts.
- Make copies of the Ethical Decision Making Worksheet (Appendix E).

Opening Questions/ Prompts

1. Explain what you know in regard to how animals are utilized by people for different purposes. Ask youth to record their responses on the flip chart paper provided.
2. While looking at the list of animal-related activities, explain your thoughts on the positive and negative aspects of each of these activities. Ask youth to record their responses on the flip chart paper provided.
3. Now for each of these positive and negative aspects listed, explain the perspective used to draw this conclusion. In other words, from whose point of view are these costs and benefits determined? Ask youth to record their responses on the flip chart paper provided.

Suggested Grouping

- Individual

Time Required

- 45 minutes to 1 hour

Materials Needed for Each Youth

- Scenarios (Appendix D; one copy of each scenario sheet—cut along dotted lines into three parts—per youth)
- Ethical Decision Making Worksheet (Appendix E; one copy per youth)
- writing utensils (one per youth)
- flip chart paper (one per youth)

Experience

1. Explain to youth that they are going to evaluate three scenarios.
2. Explain that the youth should feel free to express their thoughts and opinions and that all discussions will be conducted in a respectful manner.
3. Pass out the Scenario 1 (Appendix D) and the Ethical Decision-Making Worksheet (Appendix E).
4. Allow the youth 10 minutes to review the scenario and complete Part I of the Ethical Decision-Making Worksheet.
5. Repeat with Scenarios 2 and 3.

Sharing, Processing, and Generalizing

Follow the lines of thinking developed by the youth as they share and compare their thoughts, observations, and conclusions. If necessary, use more targeted questions as prompts to get to particular points. For example:

1. Ask for youth volunteers to read their responses to the questions on the Ethical Decision-Making Worksheet. Make sure that all points of view are represented in the discussion.
2. Repeat this process for the other two scenarios.
 - a. Ask the youth to reflect on the feelings (both positive and negative) that might be experienced by the humans and the nonhuman animals in each scenario.
3. Ask youth to reflect on their choices. Ask youth to explain the factors they considered most important in their decision-making process and those that they considered the least important.

Concept and Term Discovery/Introduction

At this point, it is important to ensure that the following terms/concepts have been introduced: **animal welfare**, **anthropomorphizing**, **ethical framework**, **ethical questions**, and **positive experiences**. (Note: The goal is to have the youth discover terms and concepts through their own exploration.)

A

APPENDIX A: Emotion Scenarios

Your class has decided to put on a play in front of the entire school and you are very interested in playing the lead role. Your teacher holds auditions and you feel like you performed very well. You are cast in an important role, but one of your classmates is given the role that you were interested in playing. As the date of the show approaches, you notice that your classmate in the lead role has not yet memorized all of his lines, and he keeps messing other students up during rehearsal. You think about how embarrassing it will be if the whole school watches your class's play fail, and you know that if you had been given the lead role you would know all of your lines by now.

The last few months have been very cold and rainy outside, but you wake up today to find a warm, sunny day. You jump out of bed and decide to go find your friends at the park. However, when you show up, you do not find anyone that you know. You go home and text a few of your friends to see where they are, but no one answers their phones. You leave messages for a couple of people and you sit on your couch, waiting for someone to call you back. You spend the rest of the day on the couch, hoping that a friend will return your call.

You and a few friends decide to go to the county fair one day. You are excited to see all of the animals, eat lots of food, and go on the rides. When you arrive, you ask your friends if they want to go on the Ferris wheel first. One of your friends objects and suggests that you all go on the biggest ride at the fair that goes upside down and spins around very fast. You don't like the big, fast rides, but your friends all look really excited to go on it. You reluctantly agree and get into line with your friends.

You have not seen your favorite cousin for a few years, but her family has decided to come visit you and your family for Christmas this year. You spend the weeks leading up to Christmas vacation anxious and excited to spend time with your family. Your vacation from school finally arrives, and you spend a few weeks celebrating the holidays with your family. You cannot help but smile the entire time that your family is in town because you love to spend time with them.

On a cold winter day, you decide to stay inside and watch movies with your family. Your dad makes everyone hot chocolate and your mom makes the popcorn. You and your brother collect all of the blankets and pillows in the house and bring them all into the family room. When you sit down on the couch, your mom lays a few blankets on top of you to make sure that you are nice and warm. After your dad hands you a big cup of hot chocolate, he turns on a movie and everyone gets settled with all of their blankets, pillows, and snacks.

You and your sister have been asking for a dog for the last few months, but your parents are worried about how big of a commitment a new pet would be. You have been making an extra effort to help out around the house to show your parents how responsible you can be. You even made a schedule with your sister for the tasks related to taking care of a dog, but your parents have not yet agreed to let you have a pet. One Friday afternoon, you come home from school and find your parents in the living room. They tell you that they have a surprise for you in the kitchen, and when you walk in the room, a very energetic golden retriever puppy runs up to you. You can't wait to show all of your friends your new puppy.

B

APPENDIX B: Human Emotion Worksheet

Scenario	Your assessment: Place an X in the appropriate box(es)			Name the emotion		
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						

D

APPENDIX D: Scenarios

Scenario 1:

Your class has a pet hamster, Bernie, and you and your classmates take turns taking care of him. Every week, a small group of your classmates works together to make sure Bernie is well fed and lives in a clean, safe environment. In order to make sure Bernie is healthy and comfortable, the group of students must give him fresh food and water daily, clean his cage every week, and ensure that he has plenty of opportunities to play and explore.

On Monday morning, when you and your classmates are discussing who will be in charge of each of Bernie's tasks, you volunteer to clean Bernie's cage at the end of the week. On Friday afternoon, you plan to clean Bernie's cage and give him a new set of toys to play with over the weekend, but you find that there is not enough bedding to sufficiently fill the bottom of the cage.

There is additional bedding in the storage closet, but you first need to find the janitor to unlock the door for you so you can get it. Just as you are about to ask your teacher if you can do so, your friend runs into the classroom and tells you that he and all of your other friends are going to a movie and you need to hurry up if you want to join them. They have a ride from his mom, and they are leaving now. You have wanted to see this movie all week, and the theater is too far away for you to ride your bicycle there. The cage is mostly clean, but the bedding is very sparse and there are no toys set up. However, there is no time to fix this if you want to go to the movie with your friends.

What would you do?



Scenario 2:

You and your family have had your dog, Sparky, for a little over 3 months now. Your family has set up a chore chart for taking care of Sparky to make sure that he gets enough food, water, exercise, and bathing opportunities. Depending on the day, it is your responsibility to feed Sparky, walk Sparky, change his water, or clean up after him when he goes to the bathroom in the back yard. Every weekend, you and your sister wash Sparky and check him for any external parasites or other health problems.

Today, it is your responsibility to feed Sparky and make sure that he has enough clean, fresh water. You wake up early in the morning and let Sparky outside in case he has to go to the bathroom. When he comes back inside, you fill his food bowl with fresh food and you fill his water bowl with clean water. After Sparky eats and drinks, you let him into the backyard to play fetch for a little while. Then, your sister comes into the living room and puts Sparky's leash on him to take him for a walk.

When your sister returns she tells you that she noticed that Sparky's behavior was strange on the walk. He was not as friendly and curious as usual and he had to be dragged along behind her on the way home. Then she heads out to meet her friend at the neighborhood swimming pool since it is a hot day. You look at your watch and realize that you are supposed to be at your violin lesson in 10 minutes, so you hurry upstairs to get your instrument. Your parents have paid for these lessons and they expect you to be on time, plus you have been working hard on your latest piece and are excited to play for your teacher. When you come back down, you notice that Sparky is panting very heavily and that his nose is very warm and his tongue seems dry. You offer him some water, but he is not interested. He starts to stand up, but then lays right back down. He seems unsteady on his feet.

Since your parents are not home, you will need to ride your bike to your lesson. You need to leave immediately to be on time.

What would you do?

D

APPENDIX D: Scenarios (continued)

Scenario 3:

You have been training your pig, Ruby, for the county fair for almost a year. Ruby lives at your house with your family, outside in a covered stall, with ample room to move around, both in and out of her sleeping area. You make sure that Ruby always has access to fresh food and water, and sufficient wallowing and rooting opportunities. During your training sessions with Ruby, you treat her gently and reward her hard work with praise and treats. And instead of yelling and handling her roughly, you gently correct her incorrect movements until she gets it right.

As part of your preshow training, you practice leading with Ruby on a daily basis. You hope that this practice will help improve Ruby's behavior for the show ring. You have seen some of your friends treat their pigs roughly by hitting them in the head as a method of punishment. You disagree with this kind of treatment of animals, so you stick to rewarding Ruby for good behavior, and you use correcting actions instead of punishment when she does something wrong.

When you and another pig participated in the county fair last year, your pig weighed more than the maximum weight class, and you were disqualified. So this year, you talked with your veterinarian and have been following a specific diet that will meet all of Ruby's nutritional needs and keep her from being hungry but is designed to keep her within the required weight range for the show. The fair is in 3 days, and you are starting to get very nervous and excited for Ruby to be judged. However, when you weigh Ruby, you find that she is a few pounds over maximum weight range even though you have been very careful about her diet. She will not be able to participate unless she loses 7 pounds in the next 3 days.

You call your veterinarian for advice and she tells you that she does not recommend that you try to make Ruby lose that amount of weight so quickly. You then call your friend who tells you that she was able to get her pig to lose weight quickly by significantly reducing her feed, taking her off water, and making her drink cranberry juice to expedite water loss.

You have already paid your show fees and they are nonrefundable.
What would you do?



APPENDIX E: Ethical Decision-Making Worksheet

Scenario number (circle one) 1 2 3

Explain the choice you would make if you were the person in this situation.

What are the potential positive and negative effects of your decision for the person involved?

What are the potential positive and negative effects of your decision for the animal involved?

Explain a real life situation, if any, where you have had to make a similar choice when caring for an animal.

Observing and Recording Animal Behaviors

Background

A strong understanding of animal behavior is an important part of being an animal caregiver, as behavior often serves as a good indicator of the animal's welfare. By becoming familiar with the animal's behavior, owners are able to more easily notice behavioral patterns that could indicate a welfare concern. One way to start understanding the behaviors of animals is to spend time observing and recording how they behave at different times and in different environmental situations.

Animals display a variety of different types of species-typical behaviors such as foraging, eating, drinking, grooming, socializing, exploring, playing, moving, obtaining comfort, and resting. These are considered normal behaviors as they are part of an animal's regular behavior patterns and help animals meet their needs. Once an animal meets one type of need, it should switch to another behavior so that over the course of the day many different behaviors are performed. For example, an animal will search for and consume food until it has had enough to eat, then it may switch to performing other behaviors such as socializing or exploring its environment.

An animal that is able to meet its needs through the expression of normal behavior is likely to be in a good state of welfare. However, sometimes animals are unable to meet their needs through their behavior and this may be indicative of compromised welfare. For example, if an animal is unable to access and eat enough food to feel full, it may continue to perform foraging behaviors even if there is no additional food available. In this case, performing foraging behaviors may take up most of the time in the animal's day, such that it does not perform the range of normal behaviors seen in animals with good welfare. In addition, sometimes when an animal cannot meet its needs through its behavior, it will begin to develop abnormal behavior. In the example of the chronically hungry animal, one might start to see it develop a behavior such as bar biting, where it repetitively chews on inedible items such as metal bars. Another example is the case of an animal that cannot meet its need to explore and as a result develops a repetitive pacing behavior at the perimeter of its enclosure. When observing animal behavior, it is important to pay attention to several things:

1. What is the behavior that the animal is performing?
2. What need is the behavior addressing?
3. How is the environment that the animal is in at the time impacting how it behaves?
4. Is the animal able to meet its need through its behavior?

Life Skills

- Head: keeping records, critical thinking
- Heart: concern for others, cooperation, communication
- Hands: leadership, contributions to group effort, self-motivation, teamwork
- Health: self-discipline

Next Generation Science Standards: Cross-Cutting Concepts

Patterns

- Observed patterns guide organization and classification, and they prompt questions about relationships and influencing factors.

Cause and Effect

- **Mechanisms and Explanation:** Events have causes that may be simple or multifaceted. Science involves the investigation and explanation of causal relationships and their mechanisms.

Systems and System Models

- Defining a system by specifying boundaries and constructing a model provides tools for understanding and testing ideas applicable throughout science.

Stability and Change

- Conditions of stability and determinants of rates of change of a system are critical elements of study.

Concepts/Vocabulary

- **Abnormal Behavior:** Any behavior considered to be outside the normal behavior pattern for animals within a particular context, class, and age.
- **Animal Welfare:** Animal welfare is the animals' state of being and describes how they are feeling or faring, both physically and psychologically.
- **Communication:** An animal's transmission of signals to other animals or humans in order to convey information; may include chemical signals, smell, sound, gestures, etc.
- **Drinking/Eating:** The consumption of food and water; essential to an animal's survival.
- **Ethogram:** A record cataloguing all of the observed behaviors of an animal.
- **Foraging:** Behaviors that involve searching for and acquiring food prior to consumption.
- **Grooming:** Maintenance behavior of the animal's coat or other physical features; often includes licking.
- **Locomotion:** An animal's method of forward propulsion, i.e., walking, swimming, running, etc.
- **Movement:** Refers to an animal's ability to change position or location.
- **Needs:** Are essential to an animal's survival and to maintaining a state of good welfare.
- **Negative Social Interaction:** Animal behavior or contact involving other animals or humans that is unpleasant, aggressive, or unconstructive in nature.
- **Normal Behavior:** Behaviors that are part of an animal's normal behavior patterns and help them meet their needs.
- **Obtaining Comfort:** Actions that animals take in order to avoid harm or distress and to meet their physical and emotional needs.
- **Play:** Active, highly variable animal behavior directed at other animals, humans, or other stimuli; may involve social or behavioral development.
- **Positive Social Interaction:** Animal behavior or contact involving other animals or humans that is pleasant, friendly, or constructive in nature.
- **Problem Solving:** Animal behavior that involves the manipulation of variables in an effort to resolve or make sense of a stimulus; contributes to the development of animals' cognition skills.

Concepts/Vocabulary

- **Rest:** Periods of ceased movement and relaxation; may involve lying down depending on the species.
- **Sleep:** Essential periods of rest and decreased awareness that must be achieved nightly.
- **Socializing:** The process during which animals develop normal social skills and learn how to interact appropriately with other animals and people.
- **Vocalization:** A method of communication that involves animals conveying information through noises and sounds.

1.1 Animal Welfare Proficiency 1.1: Observing and Recording Animal Behaviors

Getting Ready

- Copy one Ethogram for each pair/small group.
- Make enough copies of the scenarios (Appendices B-I) so each group has at least one scenario.
 - **Facilitator Tip:** It is important that all scenarios provided be included in the activity. If you do not have enough groups to cover all scenarios, provide each group with multiple scenarios. If pairs/small groups have more than one scenario, they will also need additional Ethograms.
- Print enough copies of the Animal Environment Maps (Appendices BB – II) so each group has one map to go with each scenario.
- Provide at least two sheets of flip chart paper to each group.

Suggested Groupings

- Pairs or small groups of three youth.

Time Required

- To be determined

Materials Needed

- *One Ethogram per pair/small group (Appendix A)
- *One scenario per pair/small group (Appendices B - I)
- *One Animal Environment Map per youth corresponding to scenario (Appendices BB - II)
- flip chart paper
- writing utensils: pencils, pens, markers, crayons, and/or colored pencils
- glue and/or tape
- * materials provided in curriculum

Opening Questions/ Prompts

- Explain what you know about different ways humans behave. Ask youth to record their thoughts and ideas on the flip chart paper provided.
- What types of needs do you meet through your behavior? Ask youth to record their thoughts and ideas on the flip chart paper provided.
- Explain what you know about different ways that nonhuman animals behave. Ask youth to record their thoughts and ideas on the flip chart paper provided.
- What types of needs do animals meet through their behavior? Discuss how these are similar to or different from the ways humans behave. Ask youth to record their thoughts and ideas on the flip chart paper provided.
- Explain your understanding/thoughts about reasons a human's behavior or an animal's behavior might change, either suddenly or gradually over time. Ask youth to record their thoughts and ideas on the flip chart paper provided.

1.1

Animal Welfare Proficiency 1.1: Observing and Recording Animal Behaviors

Experience

In this activity, small groups of youth will review scenarios that describe the behavior of animals in different settings. They will use tools provided to record the behaviors performed by the animals as well as the locations in which they occur. The youth will then use this information to discuss their responses to specific questions and draw conclusions about how the animal's behavior provides information about its welfare.

1. Provide each pair/small group with one Ethogram (Appendix A) per scenario, a copy of their scenario(s) (Appendices B-I), and an Animal Environment Map (Appendices BB-II) corresponding to each scenario.
2. Instruct the youth to review their scenario(s) and record the data on the Ethograms. To track the animal's behaviors throughout each day, the youth are to code the behavior and the time the behavior takes place directly on the map.
3. Have the youth organize their observations to address the following questions for each behavior observed:
 1. What is the behavior that the animal performed?
 2. What is the purpose or cause of the behavior?
 3. How was the behavior influenced by the environment?
 4. Was the animal able to meet its need through its behavior?
4. Ask each pair/small group to share their scenario and their ideas about the behaviors they recorded.
5. Ask the youth to look for similarities and differences between the different scenarios.

Sharing, Processing, and Generalizing

Follow the lines of thinking developed by the youth as they share and compare their interpretations. Ask youth to record their thoughts and ideas on the flip chart paper provided. If necessary, use more targeted questions or prompts to get to particular points.

These may include the following:

1. Explain if you recorded any behaviors that were similar between scenarios.
2. Explain if you recorded any behaviors that were different in the same species of animal.
3. Discuss your interpretations of how the animal's environment was related to its behavior.
4. Discuss your ideas on each animal's welfare. How did your observations of behavior contribute to your conclusions?
5. Discuss how paying attention to an animal's behavior could relate to the animal's care and well-being.

Concept and Term Discovery/Introduction

At this point, it is important to ensure that the following terms/concepts have been introduced: **abnormal behavior, animal welfare, communicating, drinking, eating, ethogram, exploring, foraging, grooming, locomotion, moving, needs, negative social interaction, normal behavior, obtaining comfort, playing, positive social interaction, problem solving, resting, sleeping, socializing, vocalizing** (Note: The goal is to have the youth discover terms and concepts through their own exploration.)

1.1

Animal Welfare Proficiency 1.1: Observing and Recording Animal Behaviors

Application

Facilitator:

1. Youth will be required to complete 5 days of observations of their animal(s). These can be 5 consecutive days or every other day. For each day, the youth must complete an Ethogram and an Environment Diagram.
2. Make one copy of the Animal Behavior Proficiency Procedure for Youth (Appendix J) for each youth.
3. Make five copies of the Ethogram (Appendix K) and five copies of the Animal Environment Map Template (Appendix L) for each youth. Upon completion of this proficiency they will have completed five of each document.
4. Make one copy of the Report Worksheet (Appendix M) for each youth.

Youth: Animal Behavior Proficiency Procedure for Youth (instructions included in Appendix J).

To learn more about animal behavior assessment, see the curriculum entitled *Understanding and Applying Veterinary Science* available at Shop 4-H, <https://shop4-h.org/products/veterinary-science-curriculum-1-5-digital-download>.

Suggested Grouping

- Individual

Materials Needed for Each Youth

- *Animal Behavior Proficiency Procedure for Youth (Appendix J)
- *Ethnogram Worksheet for Animal Behavior Proficiency (Appendix K); five per youth
- *Animal Environment Map Template for Animal Behavior Proficiency (Appendix L); five per youth
- *Report Worksheet for Animal Behavior Proficiency (Appendix M); one per youth
- timer (e.g., watch)
- * Materials provided in curriculum

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B

APPENDIX B

Animal: Dog

Name: Spot

Environment: Tom's dog, Spot, lives with Tom in a house with a large backyard. Spot's bed is in Tom's bedroom, next to the kitchen. His food and water bowl are in the kitchen, next to the back door. The back door has a dog door so that Spot can go in and out as he pleases. There is also a water bowl for Spot in the backyard.

Behavior: In the morning, Spot wakes up 8:00 and runs out to the kitchen to find that Tom has filled his food and water bowls for breakfast. After eating his breakfast, Spot goes outside at 8:30 to explore in the back yard. At 8:45, he sees a squirrel run into some bushes, so Spot curiously walks over and starts sniffing around. After a while, Spot loses interest in the squirrel and decides to go find Tom. Tom works from home during the day so he is able to play with Spot and take him for walks during his breaks. Spot picks up his favorite tennis ball at 10:00 and brings it to Tom, who is at his desk in the living room, to indicate that he wants to play fetch. They go outside in the back yard and play with the tennis ball, but at 11:00 Tom must go back to work. At 11:15, Spot walks over to the water bowl in the backyard and drinks some water after the game of fetch. He then finds a patch of grass in the sun to take a noontime nap. At 3:00, after Tom has finished his work, he takes Spot on a walk around the neighborhood. On their walk, Spot meets another dog and they start to sniff each other curiously. After the two dogs chase each other around playfully for a bit, Tom takes Spot home. Spot rests at Tom's feet at 4:00 while Tom watches TV in the living room. At 5:30, Tom feeds Spot dinner and refills his water bowl in the kitchen. At 9:00, Spot lays down at the foot of Tom's bed and goes to sleep.

C

APPENDIX C

Animal: Dog

Name: Jesse

Environment: Jesse lives with her owner, Grace, in a small, one-bedroom apartment with no access to outdoor space during the day. Jesse's bed is in the living room and her food and water bowls are in the kitchen next to the refrigerator. There is a big window in the living room that overlooks the busy street below.

Behavior: Jesse wakes up at 7:00 in the morning to find that Grace has already left for work. She walks out to the kitchen to find that Grace has filled her food bowl, but her water bowl is less than half full. Jesse only eats part of the food that was left for her and drinks what is left in her water bowl. At 7:30, Jesse walks out into the living room and jumps up onto the couch to watch people walk by through the window. When people walk by with other dogs, Jesse starts to bark and aggressively scratch at the window. She doesn't stop barking until she cannot see the other dogs anymore. At 10:30, Jesse jumps down from the couch and starts to pace around the apartment. She is looking for something to play with, but gives up her search after half an hour. Jesse curls up on the carpet and takes a nap until 12:30. After her nap, Jesse walks into the kitchen to get a drink of water but finds that her water bowl is empty. She paces around the apartment again until 1:00 and curls up for another nap. Jesse naps until 3:30, when Grace arrives home from work. When Grace gets home, she refills Jesse's water bowl and takes Jesse outside to go to the bathroom. At 4:00, another dog walks down the street and Jesse reacts with aggression. She starts barking at him and tries to lunge at the other dog. Grace takes Jesse back upstairs and feeds Jesse dinner at 5:00. Jesse nudges Grace's legs while she is watching TV in the living room from 5:30 until 6:00, but Grace ignores Jesse. Jesse curls up on the carpet at 6:30 and falls asleep next to the couch. Jesse wakes up to pace around the room every half hour until 9:00, when Grace tells Jesse to go to sleep.

D

APPENDIX D

Animal: Horse

Name: Brownie

Environment: Brownie lives on a farm with three other horses and his owner, Doug. Brownie and the other horses each sleep in separate, dry stalls, with plenty of room to lie down flat on the ground. There is a large field next to the stalls where Brownie and the other horses sleep. The field is about an acre, with a 5-foot fence all around to keep the horses in the field. There is a place for Brownie to get cold water to drink at all times.

Behavior: Brownie wakes up at 7:30 in the morning in stall #2 and stands up to drink some water. Doug comes in to Brownie's stall at 8:30 and leads him out to a food trough next to the field, where the other horses are already eating their hay and oats. Brownie trots over to the feeder and starts to eat his breakfast. After he finishes eating, Brownie drinks some more water and then follows the other horses to the center of the field. At 9:30, Brownie and the other horses start to play and chase each other around in the field. After an hour and a half of play, Brownie approaches another horse and uses his tail to swat at the flies on the other horse's back. The other horse follows Brownie's lead and starts to clean the flies off of Brownie's back as well. After the horses finish cleaning each other at 12:00, they continue to play and chase each other for another hour. Brownie and the other horses trot over to the water trough at 1:00 after they finish their chasing game to get a drink of water. At 1:30, Doug comes over to Brownie and leads him into the stables, where Doug prepares to take Brownie out for a ride. At 2:30, while out on a trail with Doug, Brownie hears something rustling in the bushes and starts to curiously sniff around. Later on during their walk, Doug practices commands with Brownie. Doug teaches Brownie that when he says "easy," Brownie should slow down. When Brownie listens to Doug's command and slows down, Doug strokes Brownie's mane and gives him words of encouragement. At 3:45, Brownie hears a bird chirping, which distracts him from Doug's commands. At this point, Doug decides Brownie has had enough training for the day and rides back to the stables. Brownie gets some more water in the field and joins the other horses until dinner time. At 6:00, Brownie eats his dinner and is led back into his stall to rest after a long day of play.



APPENDIX E

Animal: Horse

Name: Lightning

Environment: Lightning lives on a small area of land with his owner, Gerald. Lightning's sleeping stall is uncovered and is big enough for him to stand up in while sleeping but is not large enough for him to lie down in. There is a small, fenced field next to Lightning's stall, and there are no other horses that share the field to play. Both the stall and the field have troughs of water for Lightning to drink from during the day.

Behavior: Lightning wakes up at 8:30 a.m. and is immediately taken outside to the food trough for breakfast. Gerald gives Lightning his hay and refills his water trough. After eating, Lightning trots around the field at 9:00. He makes it around the field a few times before Gerald comes back outside to take Lightning back into his stall at 9:45. While Lightning is in his stall, he starts to chew at the wooden railing on the stall door. Lightning does not stop chewing at the wooden railing until Gerald comes back to the stall at 1:30 to groom his coat. Gerald takes Lightning outside and ties him to the fence. Gerald tries to brush Lightning's coat and comb his mane, but Lightning tries to pull away from Gerald. Lightning continues to struggle with Gerald until 2:00, when he is untied from the fence and is free to run around in the field for an hour. Gerald leads Lightning back into his stall until 5:00, when Gerald refills the food trough and brings Lightning over to eat his dinner. At 6:00, Lightning finishes the water that is left in the trough and waits for Gerald to refill the water supply. Instead, Gerald leads Lightning back into his stall so that Lightning can go to sleep. Lightning continues to chew on the wooden railing until he goes to sleep at 8:30.

F

APPENDIX F

Animal: Dairy Cow

Name: Daisy

Environment: Daisy lives on a farm with her owner, Maria, and three other dairy cows. Daisy sleeps in pen #3, which is a very spacious, dry, and comfortable area for sleeping and resting. The pen is covered to allow for a shady area to rest. Daisy's food and water troughs are next to her pen, where she can get water throughout the day. There is an overhead sprinkler system under the overhang for the cows to use in extreme heat. There is also a large, open area next to the pen for Daisy to exercise and graze in and an additional water trough to drink from. Part of the field is covered by an overhang to provide some shade for the cows during the day.

Behavior: Daisy wakes up at 8:00 and begins her morning by rubbing her body against the fence of her pen. After Daisy finishes scratching herself on the fence at 8:30, she finds that Maria has filled the food and water troughs. Daisy eats her breakfast and drinks some water before going out into the sun at 9:00 with the rest of the cows. After lying down in the sun until 11:00, Maria leads Daisy under the overhang to practice training skills for a couple of hours. Maria teaches Daisy how to pose and lead correctly for a show. When Daisy does something right, Maria rewards her with praise and kindness. When Daisy does something wrong, Maria stays patient and uses her halter lead strap in order to correct Daisy's movements and poses. After Daisy's training session, Maria takes Daisy back out to the field to graze with the other cows at 1:00. Another cow walks up to Daisy at 1:30 and starts to lick her. After the other cow finishes, Daisy turns around and starts to lick the other cow. At 3:00, Daisy briefly walks over to the sprinkler system and takes a shower to cool down from the hot sun. Daisy goes back out to the field at 3:30 and joins the other dairy cows that are now resting under the overhang. At 6:00, Maria brings the cows back inside to eat their dinner, and afterwards she leads them into their pens so that they can go to sleep. Daisy falls asleep at 8:00.



APPENDIX G

Animal: Dairy Cow

Name: Millie

Environment: Millie lives on a farm with her owner, Rick, and two other dairy cows. Millie's pen, pen #1, is big enough for Millie to sleep and rest in, and it is uncovered. Millie's food and water troughs are between her pen and the open field, where Millie grazes and spends time during the day. There is a small overhang in the field that provides some shade for Millie and the other cows during the day.

Behavior: Millie wakes up at 7:30 a.m. and walks over to her food and water troughs. The other cows have already started to eat. Most of the food is gone, so Millie eats what she can and at 8:00 she goes out to the field to start grazing. At 11:30, Rick comes out to the field and leads Millie to the area near the sleeping pens. Rick wants to practice training skills with Millie. He tries to teach Millie how to pose and lead for a show, but today's practice is not very successful. When Millie does something wrong, Rick punishes Millie with anger and harsh motions. At 12:30, Millie becomes frightened and upset when Rick handles her roughly, so she starts to kick at Rick. At 1:00, after Rick gives up with training for the day, he leads Millie back out to the other cows in the field. It is very warm outside, so the cows are resting in the shade. At 2:30, Millie tries to lie down in the shade but can only fit partially under the overhang. Millie gets up and walks over to the water trough to drink some water at 3:00. Millie walks back out to the field, but still cannot fit in the shade. Rick refills the food troughs at 5:30 and leads Millie and the other cows over to the troughs for dinner. After Millie finishes her dinner at 6:00, she drinks some more water and is led back into her pen to go to sleep. Millie starts to pace around her pen and does not stop until 7:00. She lies down for a few minutes at a time but stands up and paces around every few minutes, trying to get comfortable. Millie does not get comfortable enough to fall asleep until 10:00, when the temperature finally starts to cool off.

H

APPENDIX H

Animal: Parrot

Name: Polly

Environment: Polly lives with her owner, Jennifer, in an apartment with lots of sunlight. Her cage is on a table in the living room near a window, so Polly gets plenty of sunlight during the day. Polly's cage is very large, with many different-sized perches for her to sit on. Her cage also has numerous toys for her to play with during the day. The room that her cage is in has a door to the kitchen that Jennifer closes when she takes Polly out to fly around.

Behavior: Polly wakes up in the morning at 7:00 to find Jennifer filling her food bowls with lots of grains and fruits. Polly eats her breakfast and drinks some water. At 8:00, before Jennifer leaves for work, she comes over to the cage and talks to Polly for a few minutes. After Jennifer leaves for work at 8:30, Polly starts hopping back and forth from perch to perch. Once she reaches the top perch, Polly starts to play with her treat ball, which is hanging from the top of the cage. Polly has to shake the ball and move it around in order to get a treat out of it. At 9:30, after shaking and moving the ball around, Polly successfully gets a treat and hops back down to a lower perch to eat it. At 10:30, Polly jumps down to the bottom of the cage, where her bathing bowl is sitting. Polly grooms herself in the bowl and then hops up onto a perch at 11:00 to dry off. At 11:30, Polly continues to play with the different toys in her cage. At 2:30, Polly drinks some water and eats some of her leftover food. After her snack, Polly continues to play with her toys until Jennifer gets home from work at 4:00. When Jennifer arrives at home, she plays a short game of peek-a-boo with Polly and then lets Polly fly around the living room from 4:30 until 6:00. Jennifer puts Polly back in her cage and refills each bowl for dinner at 6:15. At 7:00, Jennifer sings a few songs to Polly and then eats her dinner next to Polly's cage. At 8:30, Jennifer turns out the lights so that Polly can go to sleep. Jennifer watches TV in her bedroom and makes sure to keep the volume low so that Polly can get enough sleep at night.

APPENDIX I

Animal: Parrot

Name: Sunny

Environment: Sunny lives in a small, loud, studio apartment with his owner, Jake. Sunny's cage is in one corner of the room, right next to the TV. His cage is small, with only a couple of perches to stand on, and very few toys for Sunny to play with during the day. Since his cage is in a corner of the room, Sunny does not get very much sunlight in his cage during the day.

Behavior: In the morning, Sunny wakes up at 7:00 to find Jake filling his food bowl with bird seed. After giving Sunny breakfast, Jake leaves at 7:30 for a long day at work. Sunny jumps down to the bottom of the cage at 9:00, where his bathing bowl is sitting, but finds that the bowl is empty. Sunny hops up to one of his perches at 9:30 and starts to play with a little ball with a bell inside. At 10:30, Sunny stops playing and starts to pull out some of his feathers. Sunny continues to pull out his feathers until he stops to get a drink of water at 12:00. After getting a drink of water, Sunny hops up to the top perch and starts to aggressively chew on the bars of his cage. At 1:30, Sunny hops over to the other perch and continues to pull out his feathers. At 3:00, Sunny stops pulling out his feathers, and looks around the room. He sits on one of his perches without moving until 5:00, when he goes back to chewing on the bars of his cage. Sunny stops biting on the bars of his cage when Jake arrives home at 7:00. At 7:30, while Jake makes himself dinner, Sunny starts making noise and screaming to get Jake's attention. Jake walks over to the cage to try to punish Sunny, but Sunny tries to bite at Jake's fingers. Frustrated with Sunny's behavior, Jake puts a sheet over the cage at 7:45 to make him think it is bedtime. While Sunny tries to sleep, Jake turns on the TV to watch while he eats his dinner. Sunny continues to make noise until Jake turns off the TV at 10:00 to go to sleep.

APPENDIX J: Animal Behavior Proficiency Procedure for Youth

1. Five days of observations are required, either consecutive days or every other day. Upon completion of this proficiency, you will have completed five Ethogram sheets and five Environment Diagrams.
2. Before beginning each day of observations, draw a detailed Animal Environment Map of the area where the animal(s) will be observed. The map is to be drawn in the space provided on the Animal Environment Diagram Template.
3. You will need a watch or a clock.
4. Observation Procedure:
 - a. For each daily observation period, have one copy of the Ethogram and one copy of the Environment Diagram.
 - b. Note the time. Your observation period will last for 10 minutes; you will be recording observations at 1-minute intervals.
 - c. Begin observing your animal(s). At the 1-minute mark, record the behavior your animal is performing by using the appropriate code from the Ethogram. Write this code on the Animal Environment Map and on the Ethogram sheet.
 - d. Write down your thoughts as to the need the animal is addressing with its behavior.
 - e. Repeat this process every minute for a total of 10 observations.
 - f. Perform your observations on five different days. Try to vary the timing of your observation to capture behaviors during the morning, afternoon, and evening if possible.
5. After you have finished all 5 days of observations, review the completed Ethograms and Animal Environment Diagrams, look for patterns, and draw conclusions based on the information you have recorded.
6. Complete the Report Worksheet.
7. At the next group meeting:
 - a. Bring the completed Ethograms and Environment Diagrams. Note: These are required for the completion of Proficiency 2.
 - b. Prepare a short, 2-to-4 minute presentation that summarizes the information on your Report Worksheet. Present this report to the group.
8. **While not required to achieve proficiency, it is recommended that you make extra copies of the Ethogram so you can continue to make regular observations of your animal. It is recommended that you make these 10-minute observations at least three times a week and keep the completed Ethograms in your project record book.**



APPENDIX K: Ethogram Worksheet for Animal Behavior Proficiency

Animal's name: _____ **Species:** _____

Date: _____ **Start time:** _____

Codes:

C: Communicating

F: Feeding / Drinking

G: Grooming Self

E: Exploring

B: Problem Solving

N: Negative Social Interaction with other animals or humans (aggression; fighting)

I: Positive Social Interaction with other animals or humans (e.g., playing, grooming others, positive physical contact)

R: Resting

S: Sleeping

V: Vocalizing

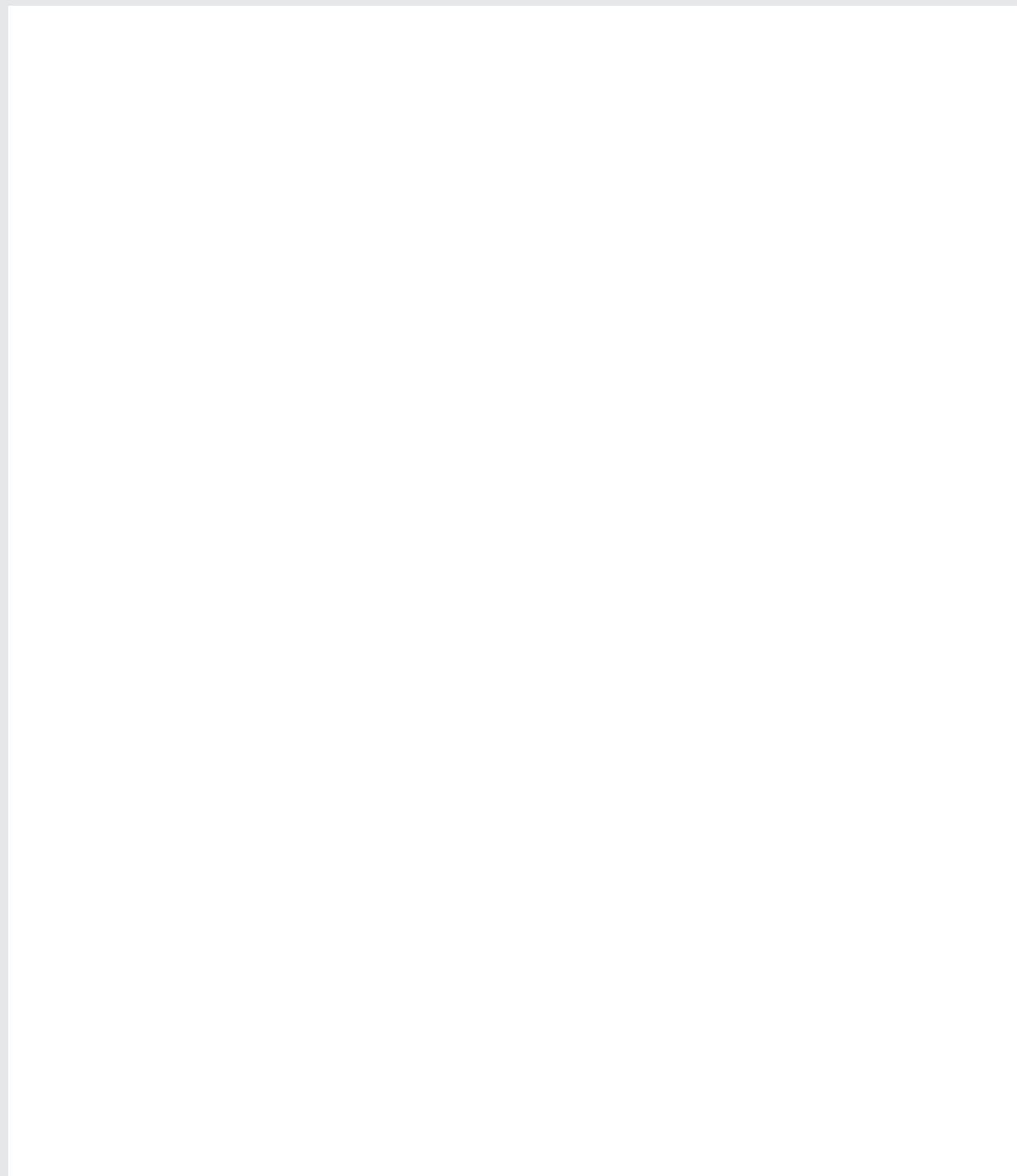
L: Locomotion (e.g., walking, running, hopping, flying)

O: Other (Describe)

Minute	Code	What need is addressed?
1:00		
2:00		
3:00		
4:00		
5:00		
6:00		
7:00		
8:00		
9:00		
10:00		

APPENDIX L: Animal Environment Map Template for Behavior Proficiency

Animal Environment Map



M

APPENDIX M: Report Worksheet for Animal Behavior Proficiency

Youth name:

Animal name:

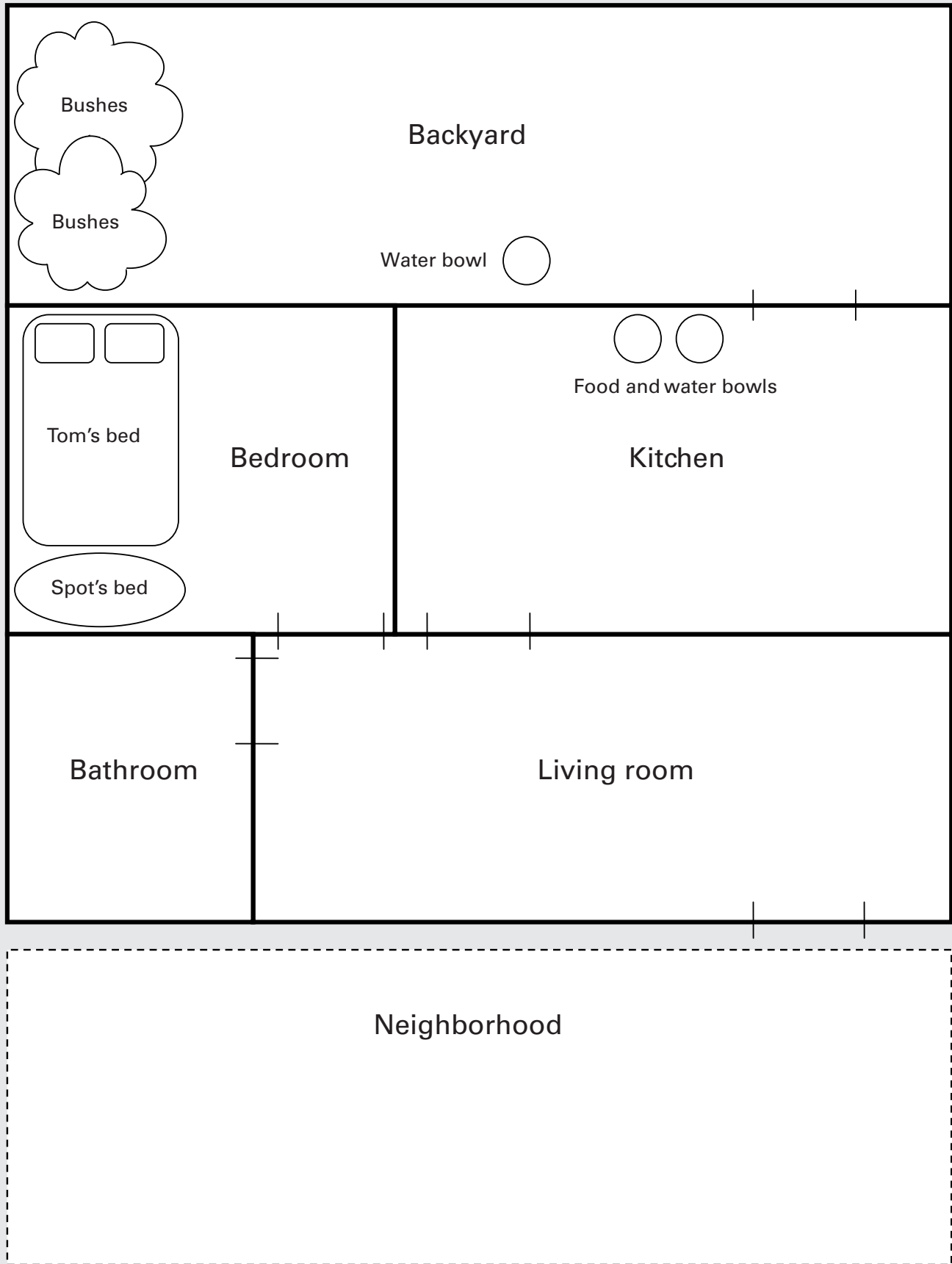
Animal species:

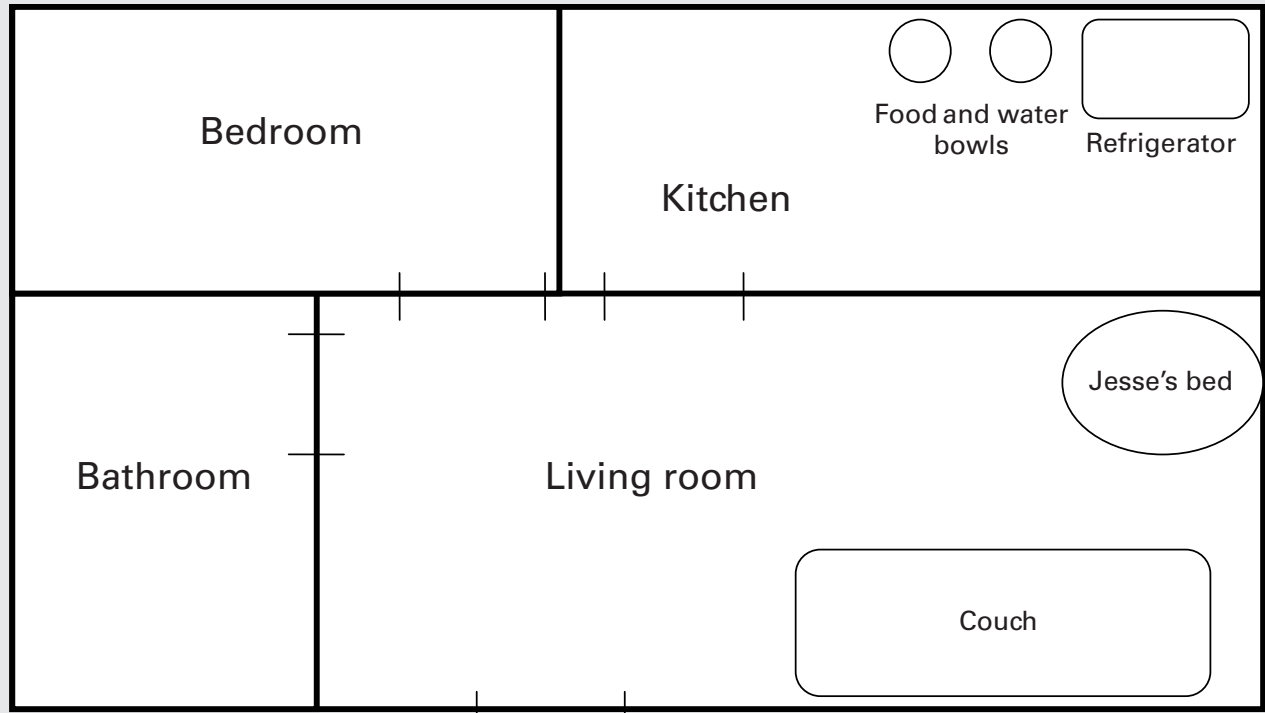
Dates of observations:

1. Explain any patterns in your animal's behavior over the entire observation period. For example, did your animal perform certain behaviors at the same time and/or place each day? Was this consistent over time? Explain the patterns you observed.
2. Describe any changes in your animal's behavior from day to day. What were these changes, and when did they occur? What might have contributed to these changes in behavior? Explain.
3. Choose three behaviors you observed and explain how the performance of each addressed a need:
4. Choose three behaviors you observed and explain how the environment in which you observed the animal affected the behavior:

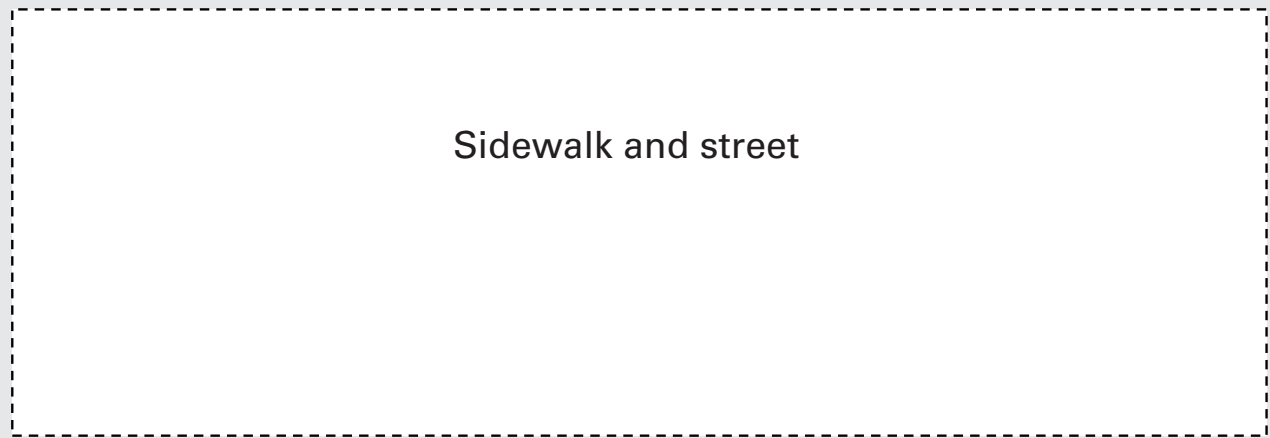
BB

APPENDIX BB: Spot's Environment

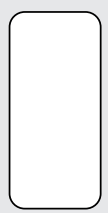
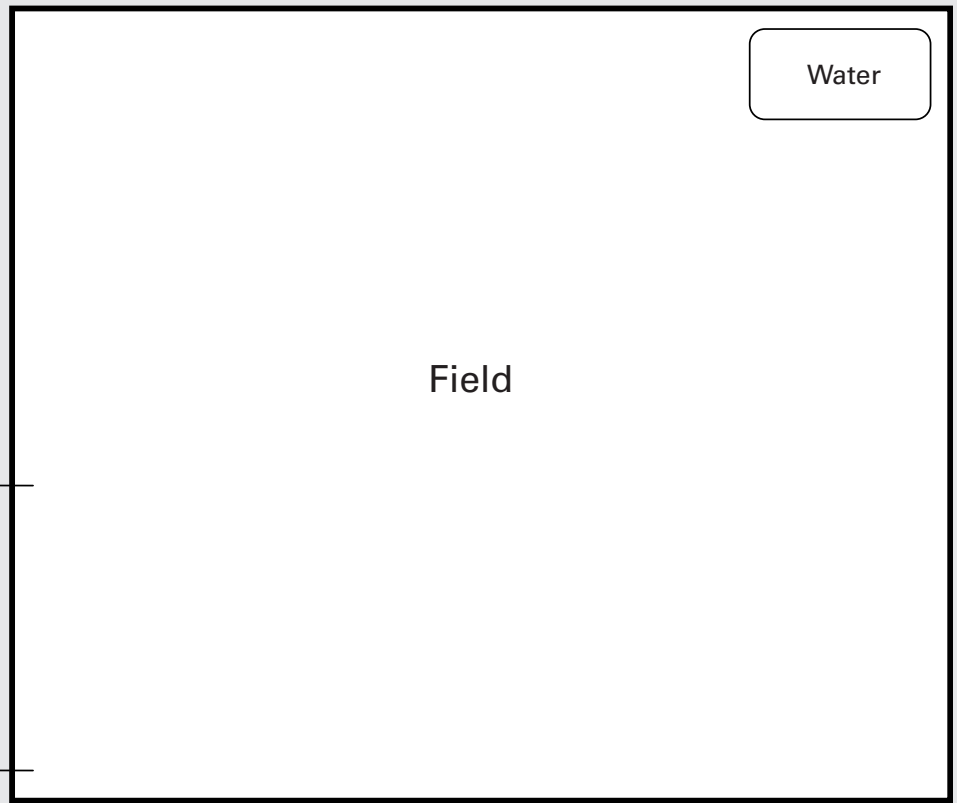




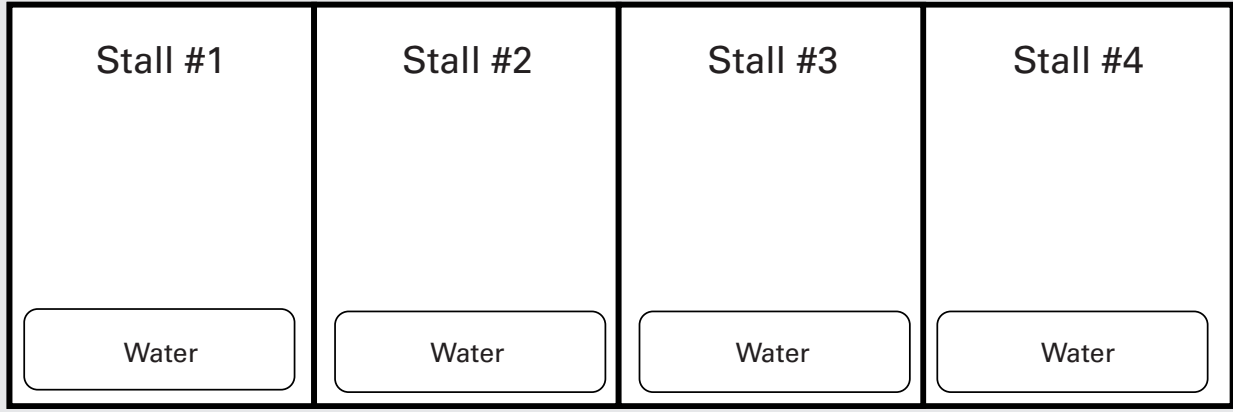
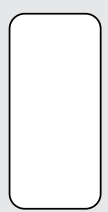
Large window



Sidewalk and street

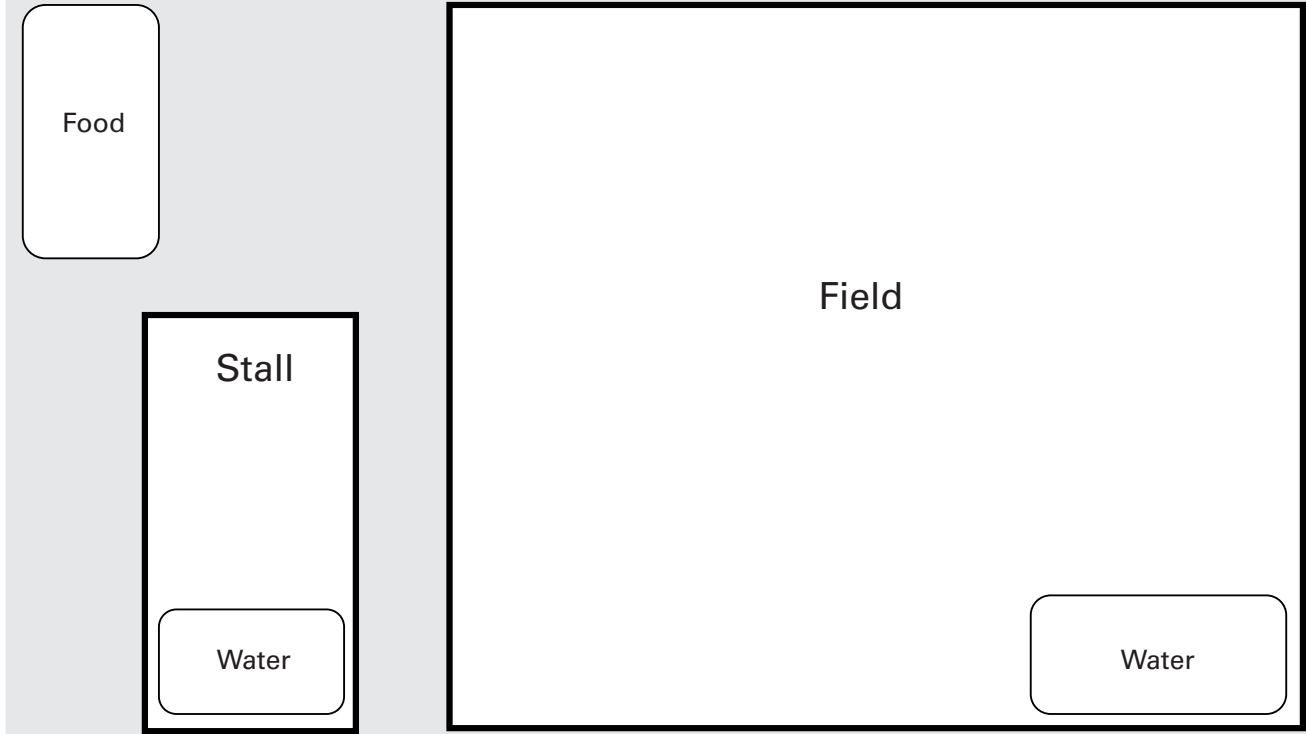


Food and water



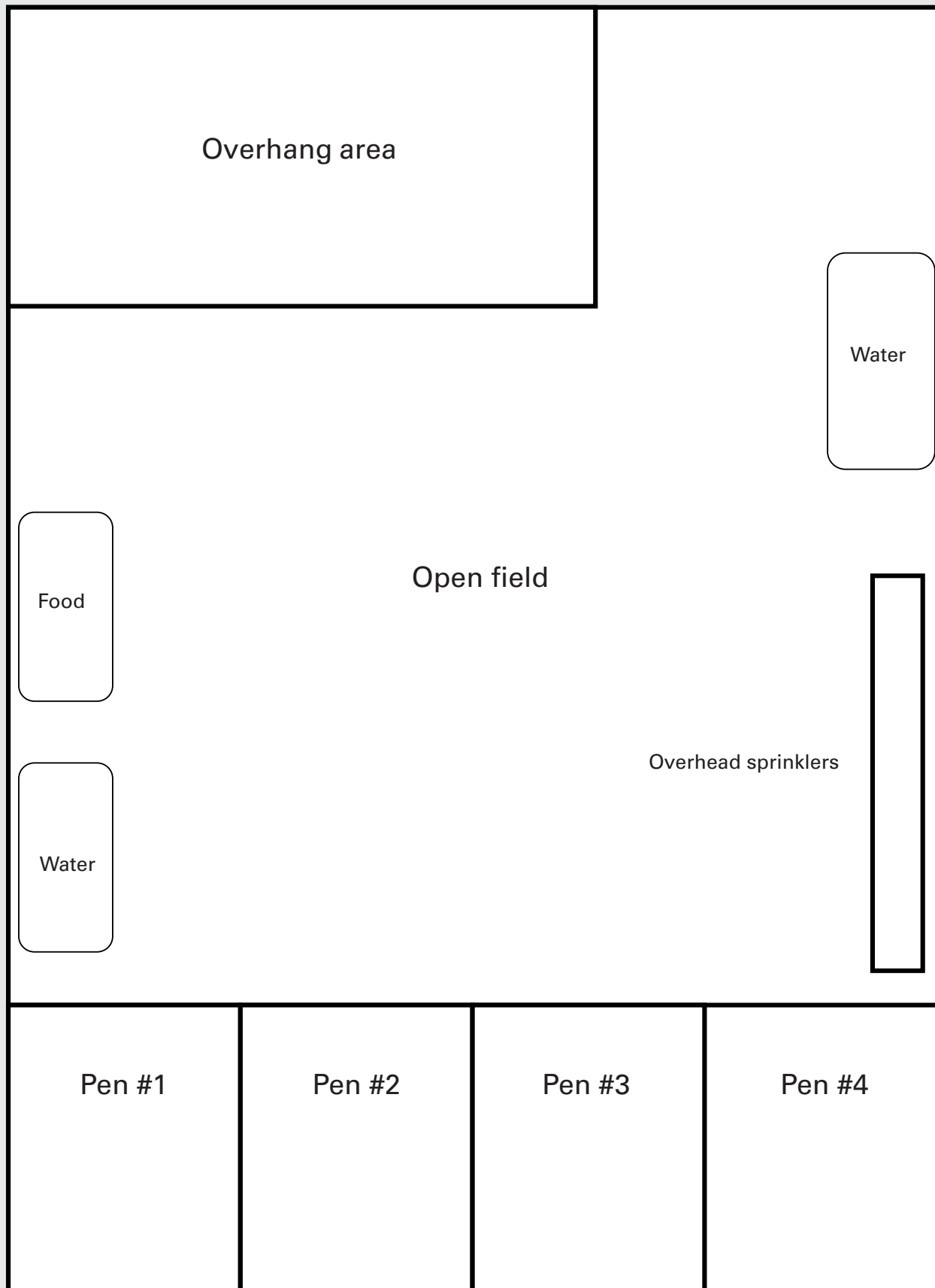


APPENDIX EE: Lightning's Environment



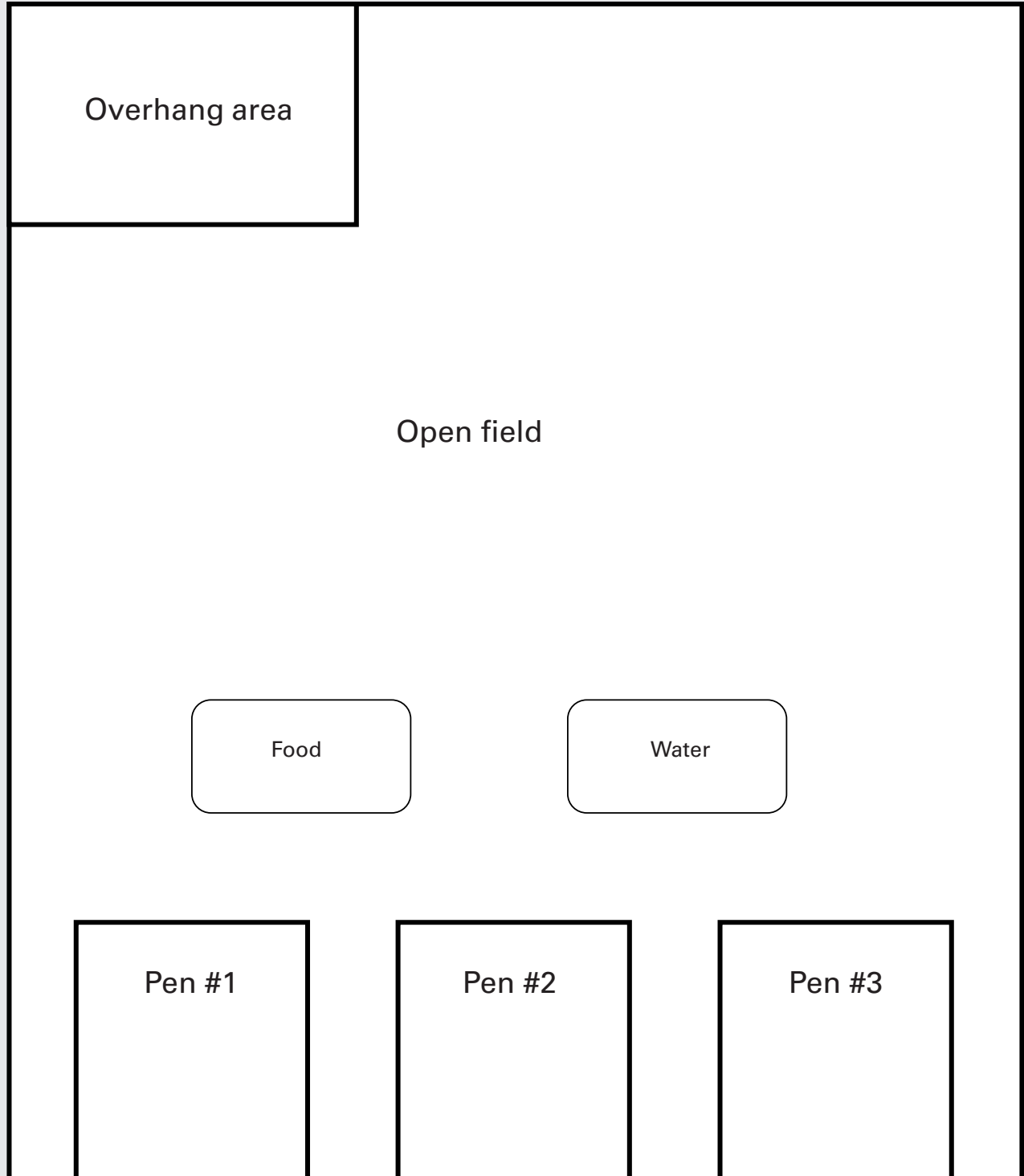


APPENDIX FF: Daisy's Environment

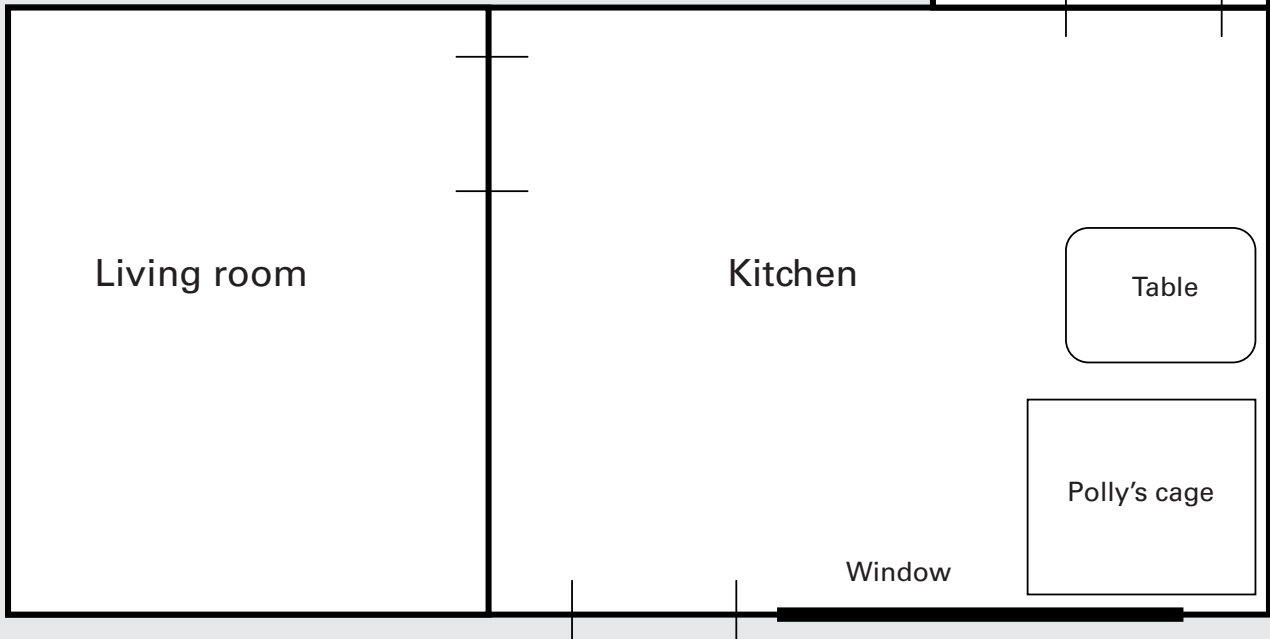
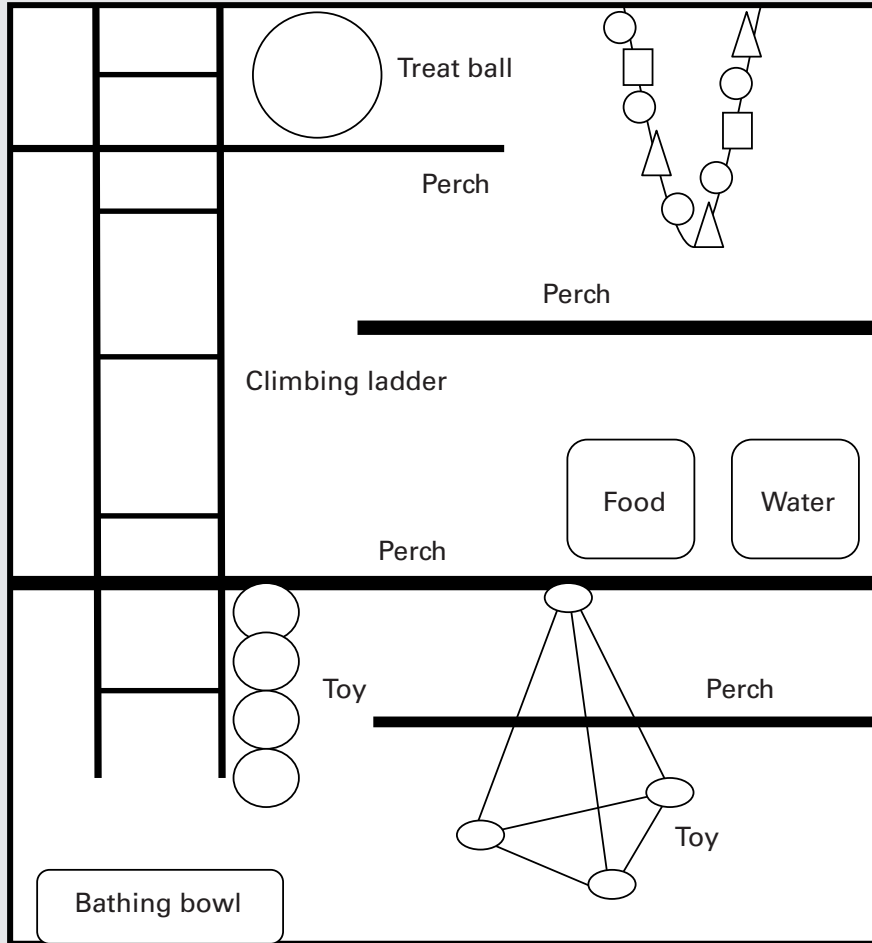




APPENDIX GG: Millie's Environment



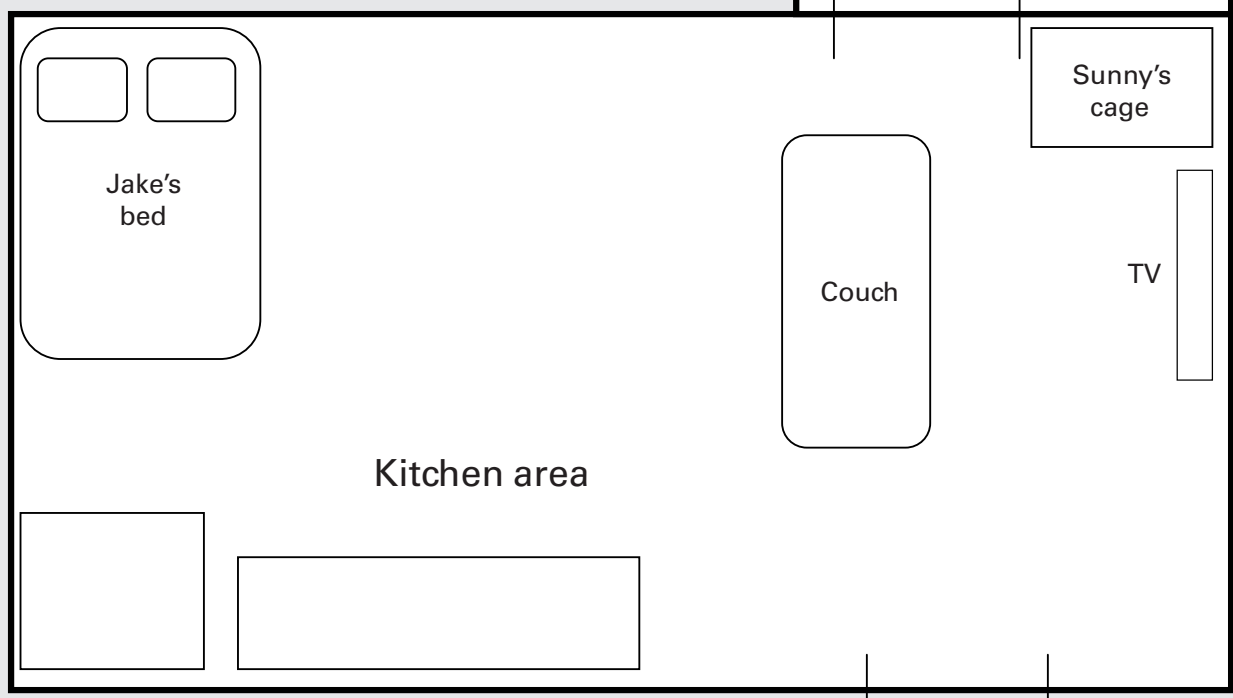
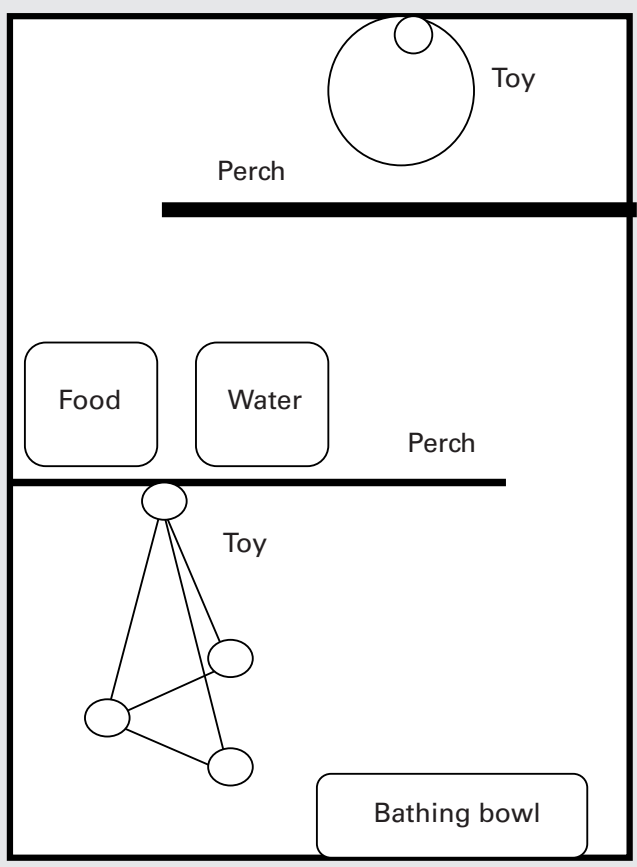
Close-up of Polly's Cage



II

APPENDIX II: Sunny's Environment

Close-up of Sunny's Cage



2 Keeping Health Records to Maintain Animal Health

Background

As animal caretakers, it is important to be aware of the different factors that contribute to animal health and well-being. This can be achieved by regular veterinary care that includes giving them all recommended **vaccines**, maintaining current **health records**, and making regular, systematic observations of one's animal(s) that include written documentation (Program 2010).

One way to help evaluate an animal's health and well-being is by performing regular "**Nose-to-Tail**" **health checks**. These help caretakers better understand their animals by observing their behaviors, recognizing early signs or symptoms of illness or injury, and assessing their environment with respect to health and safety factors, appropriateness for the specific animal(s), and enrichment opportunities. Health checks must be done regularly and systematically. The American Animal Hospital Association (AAHA) recommends a physical exam be done at home on a daily basis (AAHA 2012). The check involves not only a careful inspection of the fur or skin of the animal, but also a check of its teeth, eyes, and ears (Program 2010).

Guidelines for routine health checks (Dhein 2009; Program 2010) are outlined below:

- Observations from afar
 - Watch the animal's gait (e.g., how the animal walks/runs/moves; note any abnormalities such as a limp).
 - Check for symmetry of the animal (e.g., Does each side look the same, or are there differences between sides?).
 - Check the body condition of the animal (e.g., underweight; healthy weight; overweight).
 - Observe the animal's behavior to determine if the animal is lethargic, agitated, or exhibiting any other behaviors that are not part of its normal behavioral profile.
- Eyes
 - Check for discharge from the eyes. If there is discharge, describe the color and consistency.
 - Check for eye clarity. Provide a description (e.g., clear; cloudy; dull).
- Ears
 - Check for discharge or wax buildup. Provide a description (e.g., color; quantity; texture).
 - Smell for an odor. If there is an odor present, describe it (e.g., sour; strong; sweet).
 - Look for external parasites (e.g., fleas; ticks) or other attached material such as foxtails.

Facilitator Tip: Foxtail is a type of grass that grows during the spring, becomes dry during the summer, and can be very painful and dangerous to animals. Foxtails are sharp and pointed with microscopic barbs on one end and become mobile when embedded into the skin (Clark 1998).

Background (continued)

- Mouth
 - Check the animal's teeth and gums. Describe the teeth (color); describe the gums (e.g., color—pink, red, or white; condition—not swollen/swollen; not bleeding/bleeding)
 - Check the animal's mouth for any odors. If there is an odor present, describe it (e.g., sour; sweet; musky).
 - If possible, check beneath the tongue for foreign objects (e.g., string; sticks).
- Skin/Coat
 - Describe the appearance of the skin/coat (e.g., smooth; shiny; dull); check for signs of irritation or injury (e.g., sores; scratches; cuts).
 - Look for areas where there may be bald patches.
 - Examine for external parasites.
 - Note any bumps or growths.
- Feet/Legs/Wings
 - Check legs and feet for foreign objects or swelling.
 - Note length and appearance of nails/hooves (e.g., shiny; smooth; rough; dry; cracked; broken).
 - Check bird wings for position and symmetry (i.e., if wings are the same shape; if movement of the wings is the same on the left side as the right).
- Tail
 - Observe position (e.g., upright; downward; flat against body) and movement (wag; sway), both of which can give indications of an animal's health (e.g., a broken tail may be limp) or mental state (e.g., level of alertness; state of aggression).
- Food Intake
 - Quantity (how much; note changes).
 - Frequency (how often; note changes).
- Excrement
 - Stool
 - Note frequency (how often).
 - Observe size of stool (e.g., more or less than normal).
 - Observe consistency (e.g., solid; soft; loose; watery).
 - Observe the odor (e.g., foul-smelling).
 - Observe the color.
 - Other (e.g., blood in stool; parasites such as worms; undigested food).
- Environment
 - Check the space where the animal is housed for any hazards that could cause an injury, such as loose boards, sharp wires, etc.
 - Note the temperature of the environment and make sure it is appropriate for the animal. Note if shade or protection from wind/rain/snow is available to the animal(s).
 - Note the condition of the environment with respect to biosecurity risks such as standing water, waste, dirty bedding, etc. Make sure that clean and fresh food and water are available to each animal.

It is important to perform “nose-to-tail” health checks on a regular basis. Maintaining up-to-date and accurate health records can help provide a veterinarian with valuable information (Services n.d.).

Life Skills

- **Head:** Keeping records, planning/organizing, critical thinking, problem solving, and decision making
- **Heart:** Communication, concern for others, and empathy
- **Hands:** Teamwork and self-motivation
- **Health:** Disease prevention, self-responsibility, and character

Next Generation Science Standards: Cross-Cutting Concepts

Patterns

- Observed patterns in nature guide organization and classification and prompt questions about relationships and causes underlying them.

Cause and Effect: Mechanism and Prediction

- Events have causes, sometimes simple, sometimes multifaceted. Deciphering causal relationships, and the mechanisms by which they are mediated, is a major activity of science and engineering.

Concepts/Vocabulary

- **Agitated:** Displaying signs of discomfort or nervousness.
- **Behavioral profile:** The set of normal behavior patterns that have been observed for the animal.
- **Biosecurity risks:** Conditions that may increase the probability of disease transmission.
- **Body condition:** Body condition describes the relative fatness of an animal and generally ranges from emaciated to obese.
- **External parasites:** Parasites that may be found on the hair, skin, and in the nasal and ear passages.
- **Gait:** How an animal walks or runs. Attention should be paid to note stiffness in joints, favoring of one limb over another, or limping.
- **Health records:** Information on an animal's health that is collected systematically and organized chronologically.
- **Lethargy:** Lack of energy; sleepiness.
- **Nose-to-tail health check:** A method that animal owners can follow to collect animal health information.
- **Symmetry:** Equivalence in the two halves of an animal's body when an imaginary line is drawn from top to bottom along the spine.
- **Vaccine:** A substance that protects against a particular disease (e.g., rabies vaccine). Vaccines are typically injected into a human or animal.

2.1

Animal Welfare Proficiency 2.1: Health Checklist

Getting Ready

- Make sufficient copies of Appendices for participants.
- Subdivide the large group into pairs or small groups of three or four.
- Provide each group with flip chart paper and writing utensils.

Opening Questions/ Prompts

1. Describe some ways that your parents help make sure you remain healthy. *Ask youth to write down their thoughts and ideas on the flip chart paper provided.*
2. Describe what your doctor does when you go for a routine health check-up. *Ask youth to write down their thoughts and ideas on the flip chart paper provided.*
3. As a caretaker of an animal, describe some ways that you help make sure your animal remains healthy. Ask youth to write down their thoughts and ideas on the flip chart paper provided.
4. Describe what your veterinarian does when you take your animal in for a routine health check-up. Ask youth to write down their thoughts and ideas on the flip chart paper provided.

Suggested Groupings

- pairs or small groups of three or four

Time Required

- approximately 90 minutes

Materials Needed

- flip chart paper; one piece per pair/small group
- writing utensils
- *one copy of Appendix A, B, C, D, or E per pair/small group
- *Health Checklist Template (Appendix F); three copies per pair/small group.
- *Health Assessment Checklist (Appendix G); three copies per pair/small group
- *Disease Key (Appendix H)
- * Materials provided in curriculum

Procedure (Experience) I

Step 1: Creating a Health Checklist.

1. Assign each pair/small group one animal species from those in the Appendices (horse, cat, cockatoo, dog, and goat) and provide each pair/group with a Health Checklist Template (Appendix F).
2. Explain to the youth that they will be the caretakers of these animals and that one of their responsibilities as caretakers will be to perform routine health checks.
3. The youths' first task is to create a health checklist using the provided template so that they can make observations and keep a written record of those observations. The pairs/small groups will work together to fill in the Health Checklist Template with all of the things that they think will be important to observe and record on a daily basis. The observation categories can relate to the physical condition, behavior, or anything else they believe to be important, but the categories should be specific. For instance, when they include any physical observation categories, they should specify both the part of the body being observed and what they are specifically observing.
4. Once the pairs/small groups have completed their health checklists, discuss their ideas as a group.

Facilitator Tip: Modifications of the health checklists at this point are encouraged. Sharing ideas between pairs/small groups is an excellent way for youth to learn from each other.

Step 2: Testing the Health Checklist.

1. Provide each pair/small group with the scenario (Appendix A, B, C, D, or E) that corresponds with the animal species they were assigned in Step 1.
2. The youth should read the scenarios one day at a time. Using the health checklists they developed in Step 1 ask them to develop daily records.
3. At the end of Step 2, each pair/small group should have completed three separate health care checklists, one for each day.

2.1

Animal Welfare Proficiency 2.1: Health Checklist

Sharing, Processing, and Generalizing I

Have the pairs/small groups share their scenarios and the observations they made using the health checklists they created. Ask them to look for similarities and differences between the observations and scenarios. Follow the lines of thinking developed through the general thoughts, observations, and questions raised by the youth. If necessary, use more targeted questions/prompts such as the following:

- Explain how the health checklists you created helped you assess the animal's health depicted in your scenario. *Ask the youth to record their thoughts and ideas on the flip chart paper provided.*
- After reviewing the scenario and using your health checklist, explain how, if at all, you might consider revising your health checklist. *Ask the youth to record their thoughts and ideas on the flip chart paper provided.*

Facilitator Tip: Ask the youth to share and compare their health checklists to get ideas for improvements they could make.

Procedure (Experience) II

1. Provide each pair/small group with three copies of the Health Assessment Checklist provided in Appendix G.
2. Ask the youth to repeat the procedure they followed previously—reviewing their scenarios one day at a time—using this Health Assessment Checklist.
3. As before, each pair/small group should complete three separate health care checklists, one for each day.

Sharing, Processing, and Generalizing II

Have the pairs/small groups share their scenarios and the observations they made using the Health Assessment Checklist provided. Ask them to look for similarities and differences between the observations and scenarios. Follow the lines of thinking developed through the general thoughts, observations, and questions raised by the youth. If necessary, use more targeted questions such as the following:

- Explain how the health checklists you created were similar to or different from the Health Assessment Checklist provided. *Ask the youth to record their thoughts and ideas on the flip chart paper provided.*
- After reviewing the scenario and using the Health Assessment Checklist provided, explain how, if at all, it provided other insights into the animal's health and well-being. *Ask the youth to record their thoughts and ideas on the flip chart paper provided.*

Facilitator Tip: It is appropriate at this point to provide the youth with the diseases associated with each of the scenarios. The goal, however, is not to have the youth memorize the symptoms of the different diseases; rather, it is important that the youth recognize how using health checks and recording information is important in recognizing signs and symptoms of different diseases.

Concept and Term Discovery/Introduction

At this point, it is important to ensure that the terms/concepts **agitated, behavioral profile, biosecurity risk, external parasites, gait, health records, lethargy, "nose-to-tail" health check, symmetry, and vaccine** have been introduced or discovered by the youth. (**Note:** The goal is to have the youth discover terms and concepts through their own exploration.)

2.2

Animal Welfare Proficiency 2.2: “Nose-to-Tail” Health Checks of My Animal

In the application activity, youth will have the opportunity to evaluate the health of animals under their care over a 2-week period. They will be asked to record observations about their animal every other day. Later as a large group, the youth will share the results and discuss any potential health issues they might have discovered with the animals.

Getting Ready

Each individual is expected to observe their animal for 2 weeks, one time every other day. Assemble an animal record packet for each youth, which consists of one Animal History sheet (Appendix I), a Baseline Record sheet (Appendix J), seven copies of the daily Health Assessment sheet (Appendix K) (one for each day of observation), and the Observation Report sheets (Appendix L).

Opening Questions/ Prompts

1. Explain why it is useful to have background information on an animal. *Ask youth to write down their thoughts and ideas on the flip chart paper provided.*
2. Explain what you notice about the behavior and/or physical characteristics of animals that do not feel well. *Ask youth to write down their thoughts and ideas on the flip chart paper provided.*
3. Describe how you might know it is time for an animal to see a veterinarian. *Ask youth to write down their thoughts and ideas on the flip chart paper provided.*
4. Explain why a veterinarian would find a journal of the observations of an animal's behavior and physical characteristics useful. *Ask youth to write down their thoughts and ideas on the flip chart paper provided.*

Suggested Grouping

- individual

Time Required

- approximately 15 minutes every other day for 2 weeks

Materials Needed for Each Youth

- flip chart paper
- *Animal Record packet
 - Animal History sheet (Appendix I)
 - Baseline Record sheet (Appendix J)
 - Seven copies of the Health Assessment (Appendix K)
 - Observation Report sheets (Appendix L)
- writing tool (pencil, pen, etc.)
- disinfectant (for cleaning hands)
- painter's mask (recommended if youth have any sensitivities or allergies)
- latex (disposable) gloves
- * materials provided in curriculum

2.2

Animal Welfare Proficiency 2.2: “Nose-to-Tail” Health Checks of My Animal

Procedure (Experience)

1. Provide each individual with an animal health journal packet that includes an Animal History sheet, a Baseline Record, one Health Assessment sheet for each day of observation, and the Observation Report sheets.
2. Explain to the group that they are to complete the Animal History sheet and Baseline Record on the first day of this assignment.
3. Individuals will fill out the Health Assessment every other day for a two week period. If individuals have more than one animal, they are to choose one for observation.
4. Ask the youth to complete the Observation Report sheets by summarizing any observations, changes and conclusions based on their 2 weeks of observation. Encourage youth to document any unusual findings with photographs and then attach them to their final documents.

Sharing, Processing, and Generalizing

Have each youth share their report with the group. After each youth has presented, come together as a group to discuss the youths’ finding from their 2 weeks of observations. Follow the lines of thinking developed through the general thoughts, observations, and questions raised by the youth. If necessary, use more targeted questions/prompts to get to particular points, such as:

- Explain the benefits of keeping a health journal. Discuss some challenges you may have encountered. *Ask youth to write down their thoughts and ideas on the flipchart paper provided.*
- Explain any changes with your animal’s health during the last 2 weeks. *Ask youth to write down their thoughts and ideas on the flipchart paper provided.*
- Describe any possible health concerns that you found while observing your animal. How did you address these concerns? *Ask youth to write down their thoughts and ideas on the flipchart paper provided.*
- Compare your results to the results of the other youth. Discuss similarities and/or differences. Were there any trends with health concerns of the animal? *Ask youth to write down their thoughts and ideas on the flipchart paper provided.*

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A

APPENDIX A

Species: Horse

Name: Ranger

Age: 3 years

Day 1

Ranger was in a good mood today; he looked happy. He was groomed a few days ago so his coat is shiny and soft. He really enjoys being groomed, so I took his brush and brushed his luscious mane until he started moving around clearly asking me to take him out for a ride.

I took Ranger out for a ride and he really seemed to enjoy it. He was galloping normally; his legs are muscular and strong. But he kept curling his upper lip. I found this a little strange so I took him back to the barn and offered him some water but he didn't want any. While I was offering him water I took a look at his chocolate brown eyes that were sparkling with joy. I pet his head right between his eyes and above his nostrils and he really liked it so he started to wiggle his ears.

I walked into his stall and I stepped right into a freshly made piece of stool. To top it all off, Ranger decided he needed to urinate right at that second. My boots came out looking like a big mess. It's good to know his bowel movements are functional.

His water container was a bit low on water, so I filled it up. Since I was doing that already, I ended up bringing him more food. He is a big boy and he loves his food; before I knew it he was eating the feed as I poured it out!

Day 2

I went to visit Ranger today. When I first saw him he was pawing at the ground. I've never seen him do this before so I checked the ground to see if he was trying to kill some type of bug but there was nothing there. I also checked his legs but they were plump and strong. I filled his water container since the water was nearly all gone and I also brought him more food, which he quickly started eating. I started to pet him right above his nose but he seemed antsy. His nose seemed fine but he started to curl his lip again.

I took him out for a ride, to see if maybe he needed to release some energy. While we were out he seemed a little restless. Instead of finishing our usual loop I took him back to the stables and I let him rest. He started turning his head toward his abdomen. This was a bit alarming so I checked his pulse, which was about 65 beats per minute. Normally his pulse is at about 35 beats per minute. He looked at me with his beautiful clear eyes and propped up his ears. He usually wants to be groomed when he does this.

I tried brushing his mane, since grooming usually calms him down but it didn't. Hoping that he would feel better the next morning I gave him some space and quickly walked into his stable to clean up all of the lovely droppings produced by his bodily functions. I left him and returned right around the time he usually falls asleep and of course when I got there he was already snoring.

Day 3

The first thing I did this morning was check on Ranger. He didn't look too well and he seemed a little depressed. I didn't know what was bothering him so I carefully checked his ears for anything unusual but didn't find anything. His eyes were just as beautiful as always.

While I was getting him more water, he laid down and got back up again at least three times. Finally, he laid down and stayed on his side for a while. During this little episode he curled his lip randomly. I tried to get him to stand up so that we could go for a ride but he refused to.

I resorted to grooming him, thinking maybe that would put him in a better mood. I brushed his mane and he looked great. I also rinsed his body a bit with water just in case he was feeling a bit hot.

He then started rolling. Because he was in his stable he got stool and urine all over himself. So much for grooming him. He kept looking at his abdomen just like the day before.

I checked his pulse once he stopped and again it was around 65 beats per minute. I brought him more food but he didn't start to chow down. I kept a close eye on him for the rest of the day but I was sure to give him personal space.

B

APPENDIX B

Species: Cat

Name: Starla

Age: 6 weeks

Day 1:

I was walking home from school today and as I turned onto my street I began to hear meowing; I looked up at the tree above me and saw a baby kitten crying out for help. The baby kitten was so afraid but grateful to be rescued. It was love at first sight; I named her Starla. I took her home and set up a little area for her with kitten food and water. She went straight for the food but was napping shortly after. While she was sleeping I took a peek at her ears without waking her and noticed a small amount of black wax. Starla looked so peaceful lying there, she even rolled onto her back and put her legs in the air! This gave me a good chance to examine her closer. I remembered her scratching at her neck so I decided to look for any signs of fleas. Luckily, I was unable to find any fleas and the hair on the neck area was shorter. While petting and looking for fleas, Starla woke up abruptly due to a sneeze; only clear discharge could be seen. In between blinks, I noticed a lack of eye boogers. She yawned and fell back to sleep shortly after, her teeth were so tiny! I began to pet her little paws but noticed her nails were sharp.

After an hour, Starla woke up and was very playful! She started pouncing around and picking up the feather toy in her mouth and ran around like a wild child! While she was pouncing her tail was fluffed and stuck straight up into the air! Occasionally she would be running and pouncing so fast she would roll! I think she had to take a break; Starla ran over to the water bowl and took a few laps before she was off again to explore.

Later that evening, I looked at her litter box and noticed there was a wet spot (urine) in the litter but no stool was detected. While I freshened the litter box, Starla came over to see what I was doing; a curious little thing she is. It was getting late so I put her to bed and turned out the lights.

Day 2:

The sun was peeking in through the curtains and my first thought was Starla. I ran to check on her, and she must have heard me coming because she was waiting for me when I got there! She was meowing at me before I even turned the corner! Starla was settling in just fine but I noticed her hair looked uneven in some places. The tip of her tail was bald, too. I didn't notice that when I found her. I didn't know what to think about the patchiness but I started looking her over for other signs. I checked for fleas again but couldn't find any. I began inspecting the patchy hair and tail and noticed that there were a lot of crusts and the hairs looked like they were broken off. Those crusts were not present on my previous look over.

I watched her play for a few minutes. She was jumping around and didn't miss once! Man, she has spunk! I glanced over at her litter box and saw another wet spot but this time there was some stool. It had form but was loose. I freshened up the litter box and played with her some more. I glanced at her ears and saw the same black wax again. She didn't have anything coming out of her eyes or nose. Starla wiggled around trying to get loose of my hold on her. She is a feisty little thing! While she was wiggling around in my hands she started to yowl and that gave me a chance to look into her mouth. I didn't see any string or feathers in her mouth. Once she was free she ran circles around me!

After burning all that energy she walked over to her food and water bowl and looked like she was at a buffet! She ate until her tummy was full and chased it down with some water! Starla fell fast asleep after this. Her day was eventful to say the least.

B

APPENDIX B (continued)

Day 3:

I checked on Starla today and she seems to be scratching herself on the neck where the patches are. This really made me worried and she seemed to be getting worse. I noticed that she was still eating and drinking fine but was really, really itchy. Other than scratching at herself, Starla was playful and alert. I got a new laser pointer and she went bonkers over it! It looked like she could climb the walls chasing it!

Starla didn't seem to be slowing down even though she was chasing the laser around for a while. I had to put it away so she would calm down a little.

I started teaching her how to come on command. She acknowledged that if she responded she received a treat! Starla is so attentive. After saying "Starla" her ears would perk up and she would tilt her head and look at me! It took her a few times but she was catching on fast. I commanded Starla to come so that I could look her over. She looked at me with wide clear eyes and gripped my hands with her sharp nails. I moved her from hand to hand to confirm the same black wax in her ears.

Starla was flicking her tail and I figured she was upset and had had enough. Before putting her back down, I turned her around to look at her tail and noticed more hair was missing! I looked at her neck and the hair that had appeared broken was now missing.

Before putting her away I checked the litter box and noticed two wet spots and a small amount of stool that was formed and looked more solid than before.

C

APPENDIX C

Animal: Cockatoo

Name: Sammy

Age: 3 months

Day 1:

Today I got a new cockatoo from the pet store, who I decided to name Sammy. When I got home, I immediately set up his cage with plenty of space, water, and food, as well as a few branches for Sammy to sit on. When I first put Sammy in his new cage, he fluttered around excitedly. He started jumping from branch to branch, investigating his new home. After a while, Sammy started to slow down, and after a few more minutes, Sammy stopped moving around completely. For the next few hours, Sammy sat on a branch, looking around the room. Every once in a while, he would drink water and eat some of the seed that I put in his food container. When I checked on Sammy again a few hours later, I noticed that most of his food was gone, and his feces in the bottom of the cage were solid.

When I returned to Sammy's cage to turn out the lights and put a sheet over his cage, I found him hopping from branch to branch again. Before saying goodnight to Sammy, I noticed a few of his feathers had fallen to the bottom of the cage. Feather loss is normal but I decided to give the rest of his body a quick check, just to be safe. His eyes were clear and there were no signs of sores or swelling on his body. I put Sammy back in his cage for the night and refilled his water bowl with fresh water. I draped the sheet over his cage, said good night, and turned out the lights.

Day 7:

Sammy has been hopping around on his branches a lot lately. He really likes to explore his cage and fly around my room when I let him out. This morning when I went to check Sammy's cage, all of his seeds and water were gone. I refilled the containers of food and water and took him out of his cage to get some exercise. After I took Sammy out, I decided to clean his cage. When I reached into the bottom of the cage to replace his newspaper, I noticed that there were a lot more feathers than usual. When Sammy finally came back to me after flying around the room for a bit, I examined his skin and feathers. His skin looked fine and healthy, but I noticed that his feathers looked uneven and like they had been chewed. I looked more closely for any external parasites or irritants that would make Sammy chew his feathers, but I didn't find anything. I decided to put Sammy back in his cage and check on him later.

When I checked on Sammy a few hours later, he was drinking water and nibbling at his food. After finishing his meal, Sammy hopped down to the bottom perch and started going to the bathroom. His feces and urine both looked normal. After going to the bathroom, Sammy stayed on the same branch, looking around the room for the rest of the night. When it was time for bed, I placed a sheet over his cage and turned out the lights so that he could go to sleep.

Day 12:

Today when I woke up, I immediately went into the room with Sammy's cage to feed him breakfast. I refilled his food container with plenty of seeds and switched out his old water with new, fresh water. Sammy ate most of his food and drank almost all of his water before going back to hopping from perch to perch. As I watched Sammy happily hop from branch to branch, I noticed the incredible number of feathers that had collected in the bottom of the cage since yesterday. I checked Sammy's skin and feathers like I did last week, but this time, his skin looked very damaged. His skin looked like he had been chewing on it a lot, and he appeared to be missing a lot of feathers. I checked Sammy for bugs or irritants, but I still couldn't find anything. I let Sammy fly around the room for some exercise and I cleaned out the feathers in his cage. After cleaning, I put Sammy back in his cage and talked to him for an hour or so. I sang to him and made funny voices for him. The whole time that I was with Sammy, he did not pick at his feathers or skin. I left Sammy to go do my homework, and when I came back, I found even more feathers in the bottom of Sammy's cage. I don't know what is wrong with Sammy, but I hope he gets better soon.

D

APPENDIX D

Species: Dog
Name: Maverick
Age: 10 weeks

Day 1

I am so excited. Today we adopted a puppy from the pound. He is a 10 week old Siberian husky. We named him Maverick. Before we brought him home, Daddy and I took a good look at him. His eyes, nose and ears were all clear, and his teeth were sharp but not fully grown in. His fur was thin but Daddy said that this is just because he is a puppy. We checked his legs and tail and we didn't find any sores or swelling. Once we were home I took him straight to the backyard to play. He is full of energy and loves playing tug of war with his rope toy. Every once in a while, Maverick would take a break from playing and get a drink of water. He would run over to his water bowl by the back door, drink a little bit and run right back over to me to keep playing. We must have played with his rope toy for at least an hour!

After we played for a while, I took Maverick inside and I gave him some water and food. He ate and drank most of it before walking over to his new bed and falling asleep. He slept for almost 3 hours before waking up and going outside to go to the bathroom. His feces were smelly but easy to clean up since they were solid. He also urinated before walking back inside to go to sleep for the night. I refilled his water bowl, said goodnight to Maverick, and turned out the light.

Day 6

I have had Maverick for almost a whole week now. He is such a good puppy but the past few days have been hard. I have been performing regular checks of Maverick and I have found that his eyes, ears and mouth are all clear and look healthy. He got a small scratch on his nose from the cat but it has been healing well. His legs and tail are strong and they do not have any sores or other problems, but it looks like he is getting skinnier. Over the past few days, he has started eating less and less, and when I fed him yesterday he only ate about half of his food and only drank a few laps of water.

Lately he hasn't wanted to play as much either. He spends most of his time lying on his bed sleeping. I took him outside to play with his favorite rope toy today but all he wanted to do was lie down in the grass. I tried to play fetch with him but after a while I gave up and left him to rest outside. When I came back outside later, I found a pile of diarrhea on the grass instead of a solid pile of feces. The feces were still a normal color, but they were much harder to clean up than his normal, solid feces.

When I fed Maverick today, he ate less than half of the food that I gave him. About an hour after feeding him, I found a pile of vomit on the kitchen floor. I cleaned up the mess and led Maverick back to his bed. I hope Maverick feels better tomorrow.

Day 9

I am really starting to worry about Maverick. Today when I tried to play with him, he wouldn't even get up off of his dog bed. I brought his food and water bowl over to his bed, hoping that he would eat or drink, but he ignored me and went back to sleep. When he woke up again, I checked his face and body for any signs of health issues. His eyes, ears, mouth and fur were completely normal, but his nose was very dry and his legs were very weak. I sat down next to Maverick and started to rub his belly to make him feel better, and I noticed that he was extremely skinny. I continued to rub his belly until he fell asleep again.

After he woke up again, I was excited to find Maverick eating a few bites of food and drinking water. However, after he ate, Maverick vomited up the food that he had consumed and slowly moved towards the back door. When he got outside, he vomited one more time and went to the bathroom on the patio. His feces were completely runny, so I grabbed the hose to clean off the patio. Right before I started to clean, I noticed that Maverick's feces were red in color and contained blood. After hosing off the patio, I went back inside and found Maverick asleep on his bed. I changed the water in his water bowl and sat down by Maverick's bed for a while in case he needed anything.



APPENDIX E

Species: Goat

Name: Dot

Age: 3.5 years

Day 1

When I woke up today, I went outside to feed Dot, who I have now had for 3 years.

I filled her food and water containers and she quickly ate all of the food that I gave her. After breakfast, I took Dot out of her pen to get some exercise. While she was out of her pen, I noticed that Dot was pacing a lot and was stopping to urinate frequently. I gave her a quick check, and her eyes, nose, ears, mouth and fur were all normal.

After a couple of hours or so I led Dot back to her pen. She immediately walked over to her water container and drank most of her water. While I was refilling Dot's water, I watched Dot trot happily around her pen, waiting for me to feed her dinner. When I started to fill Dot's food container, she walked right over and started eating immediately. After eating her dinner, she drank a lot of her water, walked over to a corner and laid down.

When I came back outside to say goodnight to Dot a few hours later, she was standing up again and was pacing around her pen again. She alternated between lying down and standing up as well. I said goodnight to Dot and went back inside. When I checked on her an hour later, she was still awake and restless. By the time I came outside to check on her again an hour later, she was asleep.

Day 2:

This morning I woke up and immediately went outside to feed Dot. When I got to her pen, I found her lying down, making strange noises. I checked her eyes, nose, ears, mouth and fur again, but everything still seems normal. I started to fill her food and water containers, hoping that the food would make Dot feel better. When she stood up to walk over to her food and water, I noticed that she was still urinating a lot. However, today her urine smelled strange. I finished filling Dot's food and went back inside for a while.

Later, when I came outside to check on Dot again, I noticed that she was pacing and urinating a lot still. When I approached Dot to pet her and check on her, she seemed agitated and ducked away from me. For the rest of the day, Dot alternated between pacing around her pen trying to urinate and lying down trying to sleep. While she was lying down, Dot continued to make a lot of noise.

When I fed Dot dinner today, she ate most of her food. She also drank most of her water, and when I refilled her container, she continued to drink even more water. After abandoning her food, Dot started pacing around her pen again. Eventually, she lay down in a corner and tried to go to sleep.

Day 3:

This morning when I went outside to check on Dot, I found her pacing around her pen, attempting to urinate. I filled her food and water containers for breakfast, but Dot was not very interested in her food. She drank a lot of her water, and then continued pacing around her pen. She continued to urinate, and noticed the same odd urine odor that I noted yesterday. I gave Dot a quick check and observed that her eyes had glazed over but her nose, ears, mouth, and fur all looked normal.

After examining Dot, I refilled her water container so that she would not get dehydrated. I watched Dot walk over to drink her water and I observed that she looked very uncomfortable and strained. Once more, she ignored her food and drank a lot of water before pacing around her pen some more. Dot's constant pacing quickly exhausted her, so she lied down in a corner, and started making a lot of noise. The noises she was making were similar to the noises from yesterday, but were much louder. Dot continued to pace, urinate, and rest for the remainder of the night before finally falling asleep much later than she normally does.

F

APPENDIX F

Health checklist template	
Animal's name:	Day #:
Physical observations	
Behavioral observations	
Other observations	



APPENDIX G

Health Assessment Checklist: Day ____	
Date:	Time:
Physical	
Eyes (condition): <input type="checkbox"/> clear <input type="checkbox"/> cloudy <input type="checkbox"/> dull Extra notes:	
Eyes (discharge): <input type="checkbox"/> none <input type="checkbox"/> clear <input type="checkbox"/> color: _____ Consistency: Extra notes:	
Nose (condition): <input type="checkbox"/> clear <input type="checkbox"/> runny Extra notes:	
Nose (discharge): <input type="checkbox"/> none <input type="checkbox"/> clear <input type="checkbox"/> color: _____ Consistency: Extra notes:	
Mouth/oral cavity (teeth color): <input type="checkbox"/> white <input type="checkbox"/> yellow <input type="checkbox"/> brown <input type="checkbox"/> other: Extra notes:	
Mouth/oral cavity (gum condition): Condition: <input type="checkbox"/> swollen <input type="checkbox"/> not swollen <input type="checkbox"/> bleeding <input type="checkbox"/> not bleeding <input type="checkbox"/> odor Extra notes:	
Mouth/oral cavity (gum color): Color: Extra <input type="checkbox"/> pink <input type="checkbox"/> red <input type="checkbox"/> white notes:	
Ears (odor): <input type="checkbox"/> no odor <input type="checkbox"/> strong odor <input type="checkbox"/> weak odor <input type="checkbox"/> sweet odor <input type="checkbox"/> sour odor Extra notes:	



APPENDIX G (continued)

Ears (Condition)(Check all that apply):

clear wax buildup discharge: _____
 external parasites: _____ foreign objects: _____

Extra Notes:

Coat condition:

smooth shiny dull
 patchy matted external parasites observed
 no problems observed

Extra notes:

Skin condition (Check all that apply):

sores scratches cuts bumps
 irritations injuries external parasites no problems observed

Extra notes:

Feet/hooves/talons (Symmetry):

equal on both sides one side is different than the other

Extra notes:

Nails (Check all that apply):

Length: _____

Appearance: sharp dull bleeding shiny
 smooth rough dry cracked
 broken

Extra notes:

Feet/legs/wings (Condition):

foreign objects swelling injuries

Extra notes:

Tail (Position):

completely upright partially upright limp flat against body

Extra notes:

Tail (Movement):

wag sway no movement

Extra notes:



APPENDIX G (continued)

Behavior			
<u>Socialization with people:</u> <input type="checkbox"/> approaches/friendly with people <input type="checkbox"/> approaches/aggressive with people <input type="checkbox"/> approaches/acts cautious with people <input type="checkbox"/> avoids people altogether Extra notes:			
<u>Socialization with other animals:</u> <input type="checkbox"/> approaches/friendly with other animals <input type="checkbox"/> approaches/aggressive with other animals <input type="checkbox"/> approaches/cautious with other animals <input type="checkbox"/> avoids other animals altogether Extra notes:			
<u>Movement (Check all that apply):</u> <input type="checkbox"/> lethargic <input type="checkbox"/> medium energy <input type="checkbox"/> high energy <input type="checkbox"/> calm <input type="checkbox"/> agitated Extra notes:			
<u>Vocalization frequency:</u> <input type="checkbox"/> frequent <input type="checkbox"/> sometimes <input type="checkbox"/> never Extra notes:			
Type of food offered			
<u>Type of food offered:</u>			
<u>Quantity of food consumed:</u>			
<u>Frequency of feeding:</u>			
Waste			
<u>Solid:</u> Times per day: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3+ Consistency: <input type="checkbox"/> solid <input type="checkbox"/> loose <input type="checkbox"/> watery Size: Color: Presence of: <input type="checkbox"/> blood <input type="checkbox"/> parasites <input type="checkbox"/> food <input type="checkbox"/> other Extra notes:			

H

APPENDIX H

Colic

Colic is a condition of the digestive system that causes abdominal pain in horses. There are many possible causes for colic, which include

- diet that is too high in grain or too low in forage
- parasites (roundworm, tapeworm, bloodworm)
- moldy food
- abrupt change in feed
- not drinking enough water
- eating sand or dirt
- stress
- dental problems if the horse is not able to chew food properly

Signs of Colic

- pawing
- rolling
- bloating
- sweating
- distress
- agitation
- loss of interest in food and water
- peculiar postures (sitting, stretching)

If you suspect your horse has colic, you should consult a veterinarian for diagnosis and treatment.

Prevention

- feed on a consistent schedule and with a consistent diet. Changes in diet should be made gradually.
- make sure that abundant amounts of clean water are available.
- check feed for mold and dust. Store in closed containers.
- perform regular dental exams.
- provide adequate exercise.
- follow a deworming program as recommended by a veterinarian.
- keep feed off the ground to avoid sand ingestion.
- make sure horses have adequate forage (50 percent of the total diet).

References

Dulany, J. & J. Hubert. Common Equine Parasites Involved in Colic. Equine Health Studies Program, School of Veterinary Medicine, Louisiana State University.

Equine colic: causes, symptoms, treatment and prevention. My Horse University., http://www.myhorseuniversity.com/resources/eTips/January_2010/Didyouknow.

H

APPENDIX H (continued)

Ringworm:

Ringworm is an infection caused by a fungus that grows in the skin, hair, or nails. Ringworm is contagious. Cats may become infected either by direct contact with an infected animal or by exposure to a contaminated environment or object such as grooming tools, clippers, or bedding. Humans can also become infected through these same means.

Signs of Ringworm:

- skin lesions that generally appear on the head, ears, and fore limbs
- flaky, bald patches
- patches of redness

If you suspect your cat has ringworm, you should consult a veterinarian for diagnosis and treatment.

Prevention:

- Bathe all pets in the household with a medicated rinse or shampoo.
- Wash the infected animals' bedding and toys with a disinfectant that kills ringworm spores.
- Discard items that are impossible to thoroughly disinfect (carpeted cat trees, etc.).
- Frequently vacuum to rid the house of infected hairs and skin cells.

References:

ASPCA Pet Care. Ringworm ASPCA, <http://www.asPCA.org/pet-care/cat-care/ringworm>

H

APPENDIX H (continued)

Feather Picking:

Feather picking is a common problem with birds that can be caused by both medical and behavioral reasons. The causes of feather picking in birds include

- poor diet that lacks adequate nutrients
- exposure to toxins
- infections
- parasites
- lack of stimulation
- lack of sleep
- stress

Signs of feather picking:

- increased accumulation of feathers in the cage
- loss of feathers, especially on the breast and neck
- chewed or damaged feathers
- damaged skin

If you suspect your bird has been picking its feathers, you should consult a veterinarian for diagnosis and treatment.

Prevention:

- Provide your bird with a balanced diet consisting of pellets and a variety of fruits, vegetables, and whole grains (seeds do not provide adequate nutrients and should only be used for treats and training).
- Birds should get at least 10–12 hours of undisturbed sleep every night.
- Regularly bathe your bird without the use of soaps or shampoos.
- Give sufficient attention to your bird daily.
- Provide your bird with an adequate number of stimulating and challenging toys.

References:

Feather-Picking in Parrots: UC Davis Veterinary Medicine, [http://behavior.vetmed.ucdavis.edu/local-assets/pdfs/Feather pickingin_Birds.pdf](http://behavior.vetmed.ucdavis.edu/local-assets/pdfs/Feather%20pickingin_Birds.pdf)

H

APPENDIX H (continued)

Parvovirus:

Canine parvovirus is a highly contagious viral disease. Parvovirus is extremely contagious and can be transmitted by any person, animal, or object that comes in contact with an infected dog's feces.

Signs of Parvovirus:

- vomiting
- lethargy
- loss of appetite
- diarrhea

If you suspect your dog has parvovirus, you should consult a veterinarian for diagnosis and treatment.

Prevention:

The parvovirus vaccine is the best way to prevent an infection. Consult with your veterinarian about the best vaccination schedule for your dog.

References:

ASPCA Pet Care. Parvovirus: ASPCA, <http://www.aspca.org/pet-care/dog-care/parvovirus>

H

APPENDIX H (continued)

Cystitis:

Cystitis is an inflammation of the bladder, which occurs when bacteria from the digestive tract enters the urinary tract.

Signs of Cystitis:

- pacing
- restlessness
- agitation
- frequent urination
- excessive thirst
- strange urine odor

If you suspect your goat has cystitis, you should consult a veterinarian for diagnosis and treatment.

Prevention:

- Make sure your goat has access to roughage (hay) every day.
- Make sure to provide abundant fresh water.
- Follow a deworming program as recommended by a veterinarian.

References:

Goat Urinary Tract Infection: http://www.ehow.com/about_5467614_goat-urinary-tract-infection.html.

APPENDIX I

Animal history sheet

Owner's name:

Animal's name:

Animal's date of birth/age:

Species/breed:

Sex (Check all that apply):

male

female

fixed

intact

Current vaccinations:

Current medications:

Allergies:

List all illnesses or injuries in the past 3 months:

How were the illnesses or injuries treated?

APPENDIX J

Baseline record	
Date:	Time:
Environmental records	
Temperature of housing:	Shelter: <input type="checkbox"/> indoors <input type="checkbox"/> outdoors <input type="checkbox"/> covered <input type="checkbox"/> uncovered Extra notes:
Frequency that environment is <u>Cleaned</u> : <input type="checkbox"/> 5–7 times per week <input type="checkbox"/> 1–4 times per week <input type="checkbox"/> Less than 4 times per month Extra notes:	Availability of fresh water: <input type="checkbox"/> during meals <input type="checkbox"/> during the day <input type="checkbox"/> at night Extra Notes:
Feeding Routine (time of day, type of food, quantity of food): 1 2 3 4 5 6 Extra notes:	
Availability of nesting materials/ nesting area: <input type="checkbox"/> 1–2 hours per day <input type="checkbox"/> 3–5 hours per day <input type="checkbox"/> 6+ hours per day Extra notes:	Type of enrichment materials/availability (toys, climbing structures, etc.): 1. 2. 3. 4. 5. Extra notes:
Size of exercise/grazing environment:	Opportunities for time outdoors/exercising (walking, grazing, etc.): <input type="checkbox"/> 1–2 hours per day <input type="checkbox"/> 3–5 hours per day <input type="checkbox"/> 6+ hours per day Extra notes:

APPENDIX J (continued)

Size of sleeping environment:		Bedding type/frequency of bedding change:	
Other Animal #1			
Age:	Sex:	Species:	
Other Animal #2			
Age:	Sex:	Species:	
Other Animal #3			
Age:	Sex:	Species:	
Other Animal #4			
Age:	Sex:	Species:	
Behavioral records			
Socialization with people: <input type="checkbox"/> approaches/interacts with people <input type="checkbox"/> playful/friendly <input type="checkbox"/> aggressive <input type="checkbox"/> approaches/acts cautious with people <input type="checkbox"/> avoids people altogether Extra notes:		Socialization with other animals: <input type="checkbox"/> approaches/interacts with animals <input type="checkbox"/> playful/friendly <input type="checkbox"/> aggressive <input type="checkbox"/> approaches/acts cautious with animals <input type="checkbox"/> avoids animals altogether Extra notes:	
Movement (Check all that apply): <input type="checkbox"/> lethargic <input type="checkbox"/> medium energy <input type="checkbox"/> high energy <input type="checkbox"/> calm <input type="checkbox"/> agitated Extra notes:		Vocalization frequency: <input type="checkbox"/> frequent <input type="checkbox"/> sometimes <input type="checkbox"/> never Extra notes:	

APPENDIX J (continued)

Physical records	
Body condition: <input type="checkbox"/> underweight <input type="checkbox"/> healthy weight <input type="checkbox"/> overweight Extra notes:	Body symmetry: <input type="checkbox"/> both sides of body look the same <input type="checkbox"/> one side is different than the other Extra notes:
Coat condition (check all that apply): <input type="checkbox"/> shiny <input type="checkbox"/> dull <input type="checkbox"/> patchy <input type="checkbox"/> matted <input type="checkbox"/> external parasites observed <input type="checkbox"/> no problems observed. Extra Notes:	Skin condition (check all that apply): <input type="checkbox"/> sores <input type="checkbox"/> scratches <input type="checkbox"/> cuts <input type="checkbox"/> bumps <input type="checkbox"/> irritations <input type="checkbox"/> injuries <input type="checkbox"/> no problems observed. Extra Notes:
Gait: <input type="checkbox"/> normal <input type="checkbox"/> limping <input type="checkbox"/> favoring one limb <input type="checkbox"/> unable to walk Extra notes:	
Routine care	
Frequency of Bathing: <input type="checkbox"/> 5-7 times per week <input type="checkbox"/> 1-4 times per week <input type="checkbox"/> less than 4 times per month Extra Notes:	Frequency of Grooming: <input type="checkbox"/> 5-7 times per week <input type="checkbox"/> 1-4 times per week <input type="checkbox"/> less than 4 times per month Extra Notes:
Frequency of Nail/Hoof Trims: <input type="checkbox"/> 5-7 times per week <input type="checkbox"/> 1-4 times per week <input type="checkbox"/> less than 4 times per month Extra notes:	Frequency of Routine Vet Exams: <input type="checkbox"/> weekly <input type="checkbox"/> monthly <input type="checkbox"/> yearly Extra notes:



APPENDIX K

Day ___ Health assessment	
Date:	Time:
Physical	
Eyes (Condition): <input type="checkbox"/> clear <input type="checkbox"/> cloudy <input type="checkbox"/> dull Extra notes:	
Eyes (Discharge): <input type="checkbox"/> none <input type="checkbox"/> clear <input type="checkbox"/> color: _____ consistency: Extra notes:	
Nose (Condition): <input type="checkbox"/> clear <input type="checkbox"/> runny Extra notes:	
Nose (Discharge): <input type="checkbox"/> none <input type="checkbox"/> clear <input type="checkbox"/> color: _____ consistency: Extra notes:	
Mouth/oral cavity (teeth color): <input type="checkbox"/> white <input type="checkbox"/> yellow <input type="checkbox"/> brown <input type="checkbox"/> other: Extra notes:	
Mouth/oral cavity (gum condition): Condition: <input type="checkbox"/> swollen <input type="checkbox"/> not swollen <input type="checkbox"/> bleeding <input type="checkbox"/> not bleeding <input type="checkbox"/> odor Extra Notes:	
Mouth/oral cavity (gum color): Color: Extra <input type="checkbox"/> pink <input type="checkbox"/> red <input type="checkbox"/> white notes:	
Ears (odor): <input type="checkbox"/> no odor <input type="checkbox"/> strong odor <input type="checkbox"/> weak odor <input type="checkbox"/> sweet odor <input type="checkbox"/> sour odor Extra notes:	

K

APPENDIX K (continued)

Behavior				
Socialization with people: <input type="checkbox"/> approaches/friendly with people <input type="checkbox"/> approaches/aggressive with people <input type="checkbox"/> approaches/acts cautious with people <input type="checkbox"/> avoids people altogether Extra notes:				
Socialization with Other Animals: <input type="checkbox"/> approaches/friendly with other animals <input type="checkbox"/> approaches/aggressive with other animals <input type="checkbox"/> approaches/cautious with other animals <input type="checkbox"/> avoids other animals altogether Extra notes:				
Movement (Check all that apply): <input type="checkbox"/> lethargic <input type="checkbox"/> medium energy <input type="checkbox"/> high energy <input type="checkbox"/> calm <input type="checkbox"/> agitated extra Notes:				
Vocalization frequency: <input type="checkbox"/> frequent <input type="checkbox"/> sometimes <input type="checkbox"/> never Extra notes:				
Type of food offered				
Type of food offered:				
Quantity of food consumed:				
Frequency of feeding:				
Waste				
Solid: Times per day: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3+ Consistency: <input type="checkbox"/> solid <input type="checkbox"/> loose <input type="checkbox"/> watery Size: Color: Presence of: <input type="checkbox"/> blood <input type="checkbox"/> parasite <input type="checkbox"/> food <input type="checkbox"/> other Extra Notes:				

APPENDIX L

Observation report

Day 1:

Observation summary: _____

Changes observed: _____

Conclusions: _____

Day 3:

Observation summary: _____

Changes observed: _____

Conclusions: _____

APPENDIX L (continued)

Day 5:

Observation summary: _____

Changes observed: _____

Conclusions: _____

Day 7:

Observation summary: _____

Changes observed: _____

Conclusions: _____

APPENDIX L (continued)

Day 9:

Observation summary: _____

Changes observed: _____

Conclusions: _____

Day 11:

Observation summary: _____

Changes observed: _____

Conclusions: _____

APPENDIX L (continued)

Day 13:

Observation summary: _____

Changes observed: _____

Conclusions: _____

Meeting Animals' Needs through Housing and Husbandry

Background

Every living organism on Earth has specific needs that are essential to their survival. However, to care for animals in a humane way, simply surviving is not enough; one must also consider the animal's health and well-being when addressing their needs. Thus, to ensure an animal's **welfare**, one must attend to all of the following needs: food, water, shelter, space, and social needs.

Appropriate food and water help animals meet their **dietary needs**. Animals must be given the proper amount of food so that they are able to maintain a healthy weight and body condition; additionally, the food must be appropriate for the life stage of the animal. Water is extremely important to all animals—it is necessary for normal body functions and helps regulate body temperature—and they must have access to a water supply at all times. Additionally, the quality of the food and water needs to be high and free of contaminants.

An animal's shelter and its enclosure are critical to its well-being. A shelter must provide safety and comfort from environmental extremes. For example, animal shelters need to protect animals from **thermal stress**, a condition that can arise when an animal's environment is either too hot or too cold. Additionally, shelters and enclosures must provide adequate space so animals have access to food and water and so they can exhibit **normal behaviors**. If a shelter or enclosure does not have enough space, the **stocking density** (the number of animals per unit area) will be too great and the animal's welfare will suffer.

The **social needs** of animals must also be addressed in order to ensure an animal's welfare. An animal's social needs refer to the necessary positive stimulation that animals experience from being around other animals or people. When addressing the social needs of an animal, one must consider the animal's natural tendency to remain close to their herd, flock, pack, or owner. For instance, dogs are social animals that require adequate social time spent with humans and/or other dogs. By paying attention to each of the five animal needs, one can help to ensure the welfare of their animal.

Meeting the basic needs of the animals in our care is only the first step in good animal husbandry. As we think about designing and building animal housing, we need to make sure that our animals have adequate space, safe and comfortable flooring, protection from extremes in temperature, as well as access to food, water, appropriate social companions, and bedding. However, our job is not done once these needs are met. There are many ways that we can enrich the environments of the animals in our care. Enrichment provides extra opportunities for animals to participate in important behaviors, and allows them to make choices about how they spend their time. Depending on the species of animal, these behaviors may include **foraging, rooting, wallowing, playing, rubbing/scratching, perching, dust bathing, burrowing, exploring, or nest building**.

Providing opportunities to perform a variety of behaviors can have a positive effect on an animal's welfare by providing comfort or pleasure, aiding in information gathering, or preventing boredom. Toys, novel objects, **foraging devices**, nesting materials, novel scents, and varied furnishing can all enhance the quality of animal housing and improve the welfare of animals in our care.

Background (continued)

When animal housing does not provide opportunities for animals to perform a variety of behaviors or seek comfort, animals may experience frustration or distress, which can negatively impact their physical health and their behavior.

The purpose of this activity is to have the youth step through the process of designing a home for an animal or animals. They will need to make decisions about how to design the environment based on both the animal's needs as well as the information provided in the profile they receive.

Life Skills

- Head: planning/organizing, critical thinking, decision making
- Heart: cooperation, communication
- Hands: contributions to group effort, teamwork
- Health: managing feelings

Next Generation Science Standards: Cross-Cutting Concepts

Patterns

- Observed patterns guide organization and classification, and they prompt questions about relationships and influencing factors

Cause and Effect: Mechanism and Prediction

- Events have causes, sometimes simple, sometimes multifaceted. Deciphering causal relationships, and the mechanisms by which they are mediated, is a major activity of science and engineering.

Concepts/Vocabulary

- **Animal husbandry:** The practice of raising livestock.
- **Burrowing:** A behavior in which animals excavate soil to construct shelter for the purposes of protection from predators and climate, food storage, and facilitation of social interaction.
- **Dietary needs:** Animals have particular nutritional requirements, including water, protein, energy, vitamins, and minerals, for helping to support their health and well being.
- **Dust bathing:** A grooming behavior in which an animal covers itself in dust in order to maintain its coat.
- **Enrichment:** To provide animals with sensory and emotional stimulation in order to enhance their health and well being; enrichment encourages species-specific normal behaviors.
- **Exploring:** An animal's tendency to search, discover, and gather information about the area around them.
- **Foraging devices:** Enrichment tools used to encourage an animal to search for food.
- **Nest building:** A behavior exhibited by animals that involves the use of organic materials to construct a dwelling to serve as a source of protection from climatic conditions, predation, and other unpredictable conditions.
- **Normal behaviors:** Behaviors that are part of animals' normal behavior patterns and help them meet their needs.
- **Perching:** The natural tendency of some animals to sit on elevated platforms or objects, such as tree branches or perches.
- **Playing:** Active, highly variable animal behavior directed at other animals, humans, or other stimuli; may involve social or behavioral development.
- **Rooting:** Behavior related to foraging; involves attempts to break up the surface soil as well as the layers of soil below the surface.
- **Rubbing/scratching:** The tendency of an animal to rub or scratch an object in their environment as either a form of communication or play.
- **Social needs:** Animals have particular social requirements that include a variety of interactions with other animals, including but not limited to the development of hierarchies within a group.
- **Stocking density:** The number of animals per unit of space; how much space an animal has access to.
- **Thermal stress:** The inability of an animal to cope with the environmental temperature.
- **Wallowing:** Behavior that involves an animal coating itself in mud in order to help regulate its temperature.
- **Welfare:** Welfare is viewed as something intrinsic to the individual animal, i.e., the animal's state of being well or "faring" well. Includes physical and psychological components.

3.1

Animal Welfare Proficiency 3.1: Preparation for Outer Space!

Getting Ready

- Subdivide youth into small groups of three or four individuals.
- Make sure each individual receives one piece of paper and a writing utensil.
- Make sure each group receives the following: measuring tape, two sheets of flip chart paper, and markers.

Facilitator Tip: Complete Activity 1 before proceeding on to Activity 2.

Opening Questions/ Prompts

1. Describe the place where you live in one or two sentences. *Ask the youth to record their responses on the flip chart paper provided.*
2. People live in many different types of shelters around the world, but there are similarities among them. Based on your understanding, explain how the different types of places that people live are similar to each other. *Ask the youth to record their responses on the flip chart paper provided.*

Procedure (Experience)

1. Provide each small group with a copy of Appendix A.
2. As each group, working as a team to complete the procedure described.

Facilitator tip: Upon completion, the small groups will participate in the sharing, processing, and generalizing.

Sharing, Processing, and Generalizing

Follow the lines of thinking developed by the youth as they share and compare their thoughts, observations, and conclusions. If necessary, use more targeted questions as prompts to get to particular points. For example:

- What size pod does your group recommend? Explain why this size was chosen. Explain how your group went about determining how much space was necessary.
 - Compare the sizes that each group selected. Discuss how they are similar or different. Ask the youth to record their responses on the flip chart paper provided
- Which five items did your group select? Explain why these items were chosen. Explain how you went about selecting these items within your group.
 - Compare the lists of items selected. Discuss how they are similar or different. Ask the youth to record their responses on the flip chart paper provided.

Facilitator Tip: Youth should look for similarities and differences among their answers to each challenge. They should try to form categories that include the different responses. Types of categories include shelter, temperature control, bedding, food and water, health care, lighting, sanitation, etc. Youth should discuss why the things they chose were important to them and why other potential items were less important.

Concept and Term Discovery/Introduction

At this point, it is important to ensure that the following terms/concepts have been introduced: **dietary needs, enrichment, normal behaviors, social needs, stocking density, and welfare.** (Note: The goal is to have youth discover terms and concepts through their own exploration.)

Suggested Groupings

- Groups of 4

Time Required

- 15 minutes

Materials Needed

- writing utensils (one per youth)
 - paper (one per youth)
 - cloth measuring tape (one per group)
 - flip chart paper (two per group)
 - markers (one per group)
 - copies of Appendix A* (one per group)
- * materials provided in curriculum

3.2

Animal Welfare Proficiency 3.2: Building a Home

Getting Ready

- Divide students into pairs.
- Make sure each group receives a piece of paper and a writing utensil.
- Make enough copies of Appendices B-E for each pair to receive an animal.
- Make enough copies of the Appendices BB-EE for each pair to share a set of photos.

Facilitator Tip: Complete Activity 2 before proceeding to Activity 3.

Opening Questions/ Prompts

1. Think about the house that you live in. How do your living conditions help address your basic needs? *Ask the youth to record their responses on the flip chart paper provided.*
2. Now think about an animal's living conditions. What are some of their basic needs that should be addressed through their living conditions? *Ask the youth to record their responses on the flip chart paper provided.*
3. Think of some examples of how an animal's living conditions can address their basic needs. *Ask the youth to record their responses on the flip chart paper provided.*

Procedure (Experience)

1. Assign each pair one of the four animals and distribute the corresponding animal profile card from Appendices B-E.
2. Give each group the set of photos that corresponds with their assigned animal from Appendices BB-EE.
3. Instruct the groups to read through the basic needs of their animal and to collect a total of four photo cards that will satisfy their animal's needs. Do not specify to the groups which categories of needs the cards will satisfy.
4. Give 5 to 10 minutes for the groups to collect the necessary cards.
5. Allow students to share their findings with the other pair(s) that share the same animal.

Suggested Grouping

- Groups of 2

Time Required

- 30 minutes

Materials Needed for Each Youth

- Appendices B-E* (one set per 4 groups)
- Appendices BB-EE* (one set per 4 groups)
- writing utensils (one per group)
- paper (one per group)
- flip chart paper (one per group)
- markers for recording on flip chart paper

* Materials provided in curriculum

3.2

Animal Welfare Proficiency 3.2: Building a Home

Sharing, Processing, and Generalizing

Follow the lines of thinking developed by the youth as they share and compare their thoughts, observations, and conclusions. If necessary, use more targeted questions as prompts to get to particular points. For example:

- Which cards did everyone choose?
 - Explain your reasoning regarding your card choices. Ask the youth to record their answers on the flip chart paper provided.
- What cards do you think could apply to multiple animals?
 - Compare the basic needs of other animals. Ask the youth to write down descriptions of cards that could apply to more than one species on the flip chart paper provided.
- Discuss any difficulties that you encountered when choosing which pictures would best address your animal's needs. Ask the youth to record their answers on the flip chart paper provided.

Concept and Term Discovery/Introduction

At this point, it is important to ensure that the following terms/concepts have been introduced: **Animal husbandry, dietary needs, enrichment, perching, playing, rooting, social needs, thermal**

3.3

Animal Welfare Proficiency 3.3: A Month in Orbit!

Getting Ready

- Gather and distribute all of the necessary materials to each youth (writing utensils, paper, flip chart paper, and markers).

Facilitator Tip: Complete Activity 3 before proceeding on to Activity 4.

Opening Questions/ Prompts

1. Think about your home. Explain how being in your home makes you feel. *Ask the youth to record their responses on the flip chart paper provided.*
2. Describe some of the objects in your home that cause these emotions. Explain why they generate these feelings. *Ask the youth to record their responses on the flip chart paper provided.*

Suggested Groupings

- Individuals

Time Required

- 20-30 minutes

Materials Needed

- writing utensils (one per youth)
- paper (one per youth)
- flip chart paper (one per youth)
- markers (for recording on flip chart paper)
- copies of Appendix F* (one per youth)

* Materials provided in curriculum

3.3

Animal Welfare Proficiency 3.3: A Month in Orbit!

Procedure (Experience)

1. Provide each individual with a copy of Appendix F.
2. Ask each individual to complete the procedure described. Have youth record their answers on the paper provided.

Facilitator Tip: Upon completion, come together as a large group and participate in the sharing, processing, and generalizing.

Sharing, Processing, and Generalizing

Follow the lines of thinking developed by the youth as they share and compare their thoughts, observations, and conclusions. If necessary, use more targeted questions as prompts to get to particular points. For example:

1. Explain the feelings that you would expect to have during the first week. *Ask the youth to record their responses on the flip chart paper provided.*
2. List the four things that you chose to bring into your pod for the second week. *Ask the youth to record their responses on the flip chart paper provided.*
3. Explain how you think your feelings would change from the first to the second week. *Ask the youth to record their responses on the flip chart paper provided.*
4. List the four things that you chose to bring into your pod for the third week. *Ask the youth to record their responses on the flip chart paper provided.*
5. Explain how you think your feelings would change from the second to the third week. *Ask the youth to record their responses on the flip chart paper provided.*
6. List the one thing that you chose to keep for the final week. *Ask the youth to record their responses on the flip chart paper provided.*
7. Explain how you think your feelings would change from the third to the final week. *Ask the youth to record their responses on the flip chart paper provided.*
8. Describe the connections between the changes in your environment and the changes in your feelings. *Ask the youth to record their responses on the flip chart paper provided.*

Facilitator Tip: Youth should look for similarities and differences among their answers to each challenge. They should try to form categories that include the different responses. Types of categories include recreation, information, comfort, entertainment, learning, etc. Youth should discuss why the things they chose were important to them and why other potential items were less important.

Concept and Term Discovery/Introduction

At this point, it is important to ensure that the following terms/concepts have been introduced: **enrichment, exploring, social needs, and stocking density.** (Note: The goal is to have youth discover terms and concepts through their own exploration.)

3.4

Animal Welfare Proficiency 3.4: Are Fido and Jessie Living Enriched Lives?

Getting Ready

- Divide youth into groups of four.
- Make enough copies of Appendix G, H, I, J, K, and L so that each group receives one of each.
- Make sure each group receives the appendices, paper, writing utensils, markers, and flipchartpaper.

**Note:* The first part of the activity will be completed as one large group. The youth will then complete the rest of the activity in their groups of four.

Facilitator Tip: Complete Activities 1, 2, and 3 before proceeding to Activity 4.

Opening Questions/ Prompts

1. List some necessities that humans require to survive. *Ask the youth to record their responses on the flip chart paper provided.*
2. Go beyond the necessities and list objects that facilitate enriched activities and experiences that enhance a person's well-being. *Ask the youth to record their responses on the flip chart paper provided.*
3. Describe the differences between living a life where only basic needs are met and living a life filled with enrichment activities and diverse experiences. *Ask the youth to record their responses on the flip chart paper provided.*
4. List some necessities that animals require to survive. *Ask the youth to record their responses on the flip chart paper provided.*
5. Go beyond the necessities and list objects that facilitate enriched activities and experiences that enhance an animal's well-being. *Ask the youth to record their responses on the flip chart paper provided.*

Procedure (Experience)

- As a large group, read through the example list of behaviors that we as animal owners want to support (Appendix G).
- As a group, come up with at least one example of enrichment activities for each of the listed behaviors. Record the brainstormed enrichment activities in the Appendix G table.
- After reading the list of behaviors and brainstorming enrichment activities, read through the two examples of enrichment schedules for dogs (Appendix H). Work together to compare the schedules and evaluate how each schedule supports each of the listed behaviors from Appendix G.
 - If necessary, use more targeted questions to help facilitate discussion. Some examples include:
 - Do the animal owners provide a variety of activities for Jessie and Fido?
 - How many behaviors does Jessie's schedule of enrichment activities support? What about Fido?
 - Do you think that Jessie's schedule is missing any important activities? Do you think that Fido's schedule is missing anything?

Suggested Groupings

- Groups of 4

Time Required

- 30-45 minutes

Materials Needed

- writing utensils (one per youth)
- paper (one per youth)
- example Behaviors table template (one per group) (Appendix G)*
- example of enrichment schedules for dogs (one per group) (Appendix H)*
- Behavior/Enrichment Activity table template (one per group) (Appendix I)*
- calendar template (one per group) (Appendix J)*
- Behavior Key (one per group) (Appendix K)*
- Activity Key (one per group) (Appendix L)*
- flip chart paper (one per youth)
- markers

* Materials provided in curriculum

3.4

Animal Welfare Proficiency 3.4: Are Fido and Jessie Living Enriched Lives?

- iv. How can Jessie and Fido's schedules be improved?
Facilitator Tip: Ask for a volunteer to record the group's thoughts on flip chart paper.
4. Have the youth form groups of four.
5. Assign an animal to each group of four (swine, poultry, cattle, rabbits).
6. Instruct the youth to come up with a list of behaviors that we as animal owners want to support. Make sure that the groups tailor their list to their group's specific assigned animal. They should keep the example list for dog behaviors in mind while creating their own list. Have youth record their list in the table from Appendix I.
 - a. If the youth have trouble coming up with their own list of behaviors, encourage them to refer to the key of behaviors (Appendix K) as a source of inspiration.
7. After each group develops a list of behaviors, instruct youth to think of examples of enrichment activities that would support each behavior from their list and fill in the corresponding boxes in the table from Appendix I.
 - a. If youth have trouble brainstorming enrichment activities, encourage them to refer to the key of activities (Appendix L) as a source of inspiration.
8. Using the calendar template (Appendix J), instruct each group to create an enrichment calendar for their animal, similar to the schedules given as examples from the first part of the activity.
9. After completing the schedule, have each group share their enrichment calendars with the other groups.

Facilitator Tip: Upon completion, the small groups will participate in the sharing, processing, and generalizing.

Sharing, Processing, and Generalizing

Follow the lines of thinking developed by the youth as they share and compare their thoughts, observations, and conclusions. If necessary, use more targeted questions as prompts to get to particular points. For example:

1. How does your group's enrichment schedule differ from the other groups' schedules? How are they similar? *Ask the youth to record their responses on the flip chart paper provided.*
2. Why do you think that it is important to give animals variation in their activities and enrichment objects? *Ask the youth to record their responses on the flip chart paper provided.*
3. Do you think that your animal's enrichment schedule could apply to another animal? Why or why not? *Ask the youth to record their responses on the flip chart paper provided.*

Concept and Term Discovery/Introduction

At this point, it is important to ensure that the following terms/concepts have been introduced: **burrowing, dust bathing, foraging devices, nest building, rubbing/scratching, social needs, wallowing, and welfare.** (Note: The goal is to have youth discover terms and concepts through their own exploration.)

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A

APPENDIX A: Planning for Outer Space

1. You have been asked to participate on a team that will be designing a new International Space Station. The space station will be used for scientific research and astronauts will live in the station for up to 1 year at a time. Your group has to work together to come up with some general plans that the engineers will use to build the living quarters.
2. First, they would like you to determine the amount of space necessary for a pod that will house four astronauts. Space is limited at the station, so you have been asked to determine the minimum amount of space necessary if four people are going to be in the space station for up to 20 hours per day (including sleep). Using the measuring tape provided, please work together to determine the minimum size pod you would recommend. Record your answer on the paper provided.
3. Next, they would like you to determine how we should furnish the space. Working together, please create a list of the five most important items that your group would recommend be included in the space. Please list each item on the paper as well as a brief description of why you included the item. You do not have to include an air provision system in your list.

Dairy Cow

You have signed up to participate in a dairy calf project this year and will be picking up your calf in 1 month. Before she arrives, you will need to make sure you have appropriate housing set up for her. Here are some things you will need to know in order to make decisions about how you will design her housing:

- The calf you will be getting is a female heifer, 2 years old.
- She was a member of a herd that is used for milk production.
- The herd she came from was 900 in size, all female, ages ranging from newborns to 4 years old.
- The calf was weaned when she was about 7 weeks old.
- She has been accustomed to feeding from an open-topped cattle trough and drinking water from a ball-valve drinker.
- You will be housing this calf in Tulare County, located in the Central Valley of California.
- Tulare County, CA:
 - annual average temperature: 60.4°F
 - maximum average temperature: 73.97°F
 - minimum average temperature: 46.77°F
 - average annual precipitation: 23.75 in.
- A flat, grassy area, spanning numerous acres, is available to create the environment.

C

APPENDIX C

Swine

You have signed up to participate in a pig project this year and will be picking up your pig in one month. Before she arrives, you will need to make sure you have appropriate housing set up for her. Here are some things you will need to know in order to make decisions about how you will design her housing:

- This pig is a female Yorkshire. She is about 1 year old.
- She has been used as a pasture pig, meaning she is let out on overgrown fields and used as a natural lawnmower.
- She has been living on 1 to 2 acres of land with three other female pigs.
- The acreage that she has been living on is surrounded by three strands of hot wire.
- The pasture she has been living on has a dry, covered shelter big enough for all the pigs to fit in
- You will be housing the pig in San Benito County, located in Northern California.
- San Benito County, CA:
 - annual average temperature: 57.8°F
 - maximum average temperature: 69.78°F
 - minimum average temperature: 45.77°F
 - average annual precipitation: 15.93 in

D

APPENDIX D

Poultry

You have signed up to participate in a backyard chicken project this year and will be picking up five chicks in one month. The chicks will be a little over 60 days old when you receive them. Before the chicks arrive, you will need to make sure you have appropriate housing set up for them. Here are some things you will need to know in order to make decisions about how you will design their housing:

- You will be receiving five chicks, 62 days old.
- For the first 60 days of their lives the chicks were housed in a chicken brooder. This was an enclosed structure with pine shaving bedding. The bedding of the brooder was changed every few days.
- The structure contained a heat lamp and a homemade feeder and waterer. The brooder featured an elevated area, which was away from the heat lamp, and it was used to encourage the chicks to roost or perch.
- Each chick had about 2.5 square feet inside the brooder.
- The brooder was kept at a nice 95 degrees during the first week of the chicks' lives. Every week the temperature was dropped by five degrees.
- You will be housing these chicks in Sonoma County, California.
- Sonoma County, CA:
 - annual average temperature: 57.90°F
 - maximum average temperature: 70.41°F
 - minimum average temperature: 45.43°F
 - average annual precipitation: 44.54 in



APPENDIX E

Rabbits

A friend of yours has a 3-year-old pet rabbit. They are moving and cannot take their rabbit with them. You have offered to adopt their rabbit for them and will be receiving the rabbit in about a month. Before the rabbit arrives, you will need to make sure you have appropriate housing set up for him. Here are some things you will need to know in order to make decisions about how you will design his housing:

- The rabbit is an indoor rabbit.
- The rabbit has been given free range of the house he lives in. He uses his cage as a litter box and a place to get food and water.
- His cage does not have a mesh bottom. Feces and urine collect on the hay shaving bedding. A cage like this should have been changed daily. Unfortunately, the owner did not have enough time to do this and only changed it about twice a week.
- The owner did not do a thorough job of bunny proofing the house. A few times the rabbit has been caught in electrical wires.
- The rabbit has been used to pellet feed from the store. The rabbit has always been given fresh fruit or vegetables for treats, but the owner has had a problem with excessive treating, which has cause digestive problems for the rabbit.
- You will be housing this rabbit in Mendocino County.
- Mendocino County, CA:
 - annual average temperature: 55.93°F
 - maximum average temperature: 69.17°F
 - minimum average temperature: 43.02°F
 - average annual precipitation: 46.32 in
- When creating your environment for the rabbit, you must think about the type of cage it should have, bunny proofing, food, water, and social needs.

F

APPENDIX F: A Month in Orbit

1. Congratulations! You have been selected as one of the first young astronauts to complete a mission to the International Space Station. Your mission is for 1 month. The Space Station has bathroom facilities, plenty of food and water, and clothing to keep you warm enough, but due to limited space you will not be able to bring any of your belongings with you on the mission.
2. For the first week you spend about 4 hours a day exploring the space station and participating in experiments. The rest of your time is free, but you cannot venture beyond your pod, which is about the size of a bedroom. Your pod, is furnished with only a sleeping area and a light.
 - a. Given the fact that your health is good and you have food and clothing, but no other objects, how do you think you would feel during this week? What would you do with all of your spare time? Write your thoughts on the paper provided.
3. At the end of the first week the National Space Commission has scheduled a supply rocket to come to the station, so you are permitted to have four of your things brought to you.
 - a. What things would you choose? Write these things down on a piece of paper. Explain why you chose those items.
4. At the end of the second week the National Space Commission has scheduled another supply rocket to come to the station, so you are permitted to have four additional items brought to you.
 - a. What things would you choose? Write these things down on a piece of paper. Explain why you chose those items.
5. At the end of the third week, there is a potential disease-causing agent detected at the station. Everything must be sterilized, so all of your items need to be removed from your pod, and only one of those things will be given back to you for your final week.
 - a. Of the things you had in your pod, which one will you keep for your final week in quarantine? Write this item on the paper provided, and explain why you chose it.



APPENDIX G

As animal owners, we want to support a variety of different behaviors that our animals exhibit. For example, dog owners should support each of the following behaviors on a regular basis:

Behavior	Corresponding enrichment activities
Exploration	
Chewing	
Problem solving	
Interactive play	
Digging	
Following scents	
Learning/ Training	

H

APPENDIX H

Dog: Jessie

Time of day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning	fetch in the backyard	hidden toys in backyard	fetch in the backyard	hidden toys in backyard	fetch in the backyard	buried treats in sandbox	hike off leash on a trail
Afternoon	treat	nylon bone	buried treats in sandbox	nylon bone	treat	fetch at dog park	buried treats in sandbox
Evening	walk on leash	obedience training	walk on leash	obedience training	walk on leash	hidden toys in backyard	nylon bone

Dog: Fido

Time of day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning	nylon chewtoy	rope bone	kong rubber bone	rope bone	nylon chewtoy	fetch in the backyard	fetch in the backyard
Afternoon	rope bone	fetch in the backyard	nylon chew toy	kong rubber bone	rope bone	kong rubber bone	nylon chewtoy
Evening	walk on leash	walk on leash	walk on leash	walk on leash	walk on leash	walk on leash	walk on leash

I

APPENDIX I

Assigned animal: _____

Behavior	Corresponding enrichment activities

APPENDIX J

Assigned animal: _____

Time of day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning							
Afternoon							
Evening							

K

APPENDIX K: Behavior Key

Swine

- exploration
- rooting
- play
- grooming
- social
- nesting
- learning

Poultry

- perching
- nesting
- foraging
- play
- dust bathing
- exploration
- social

Rabbits

- exploration
- problem solving
- interactive play
- climbing
- foraging
- social
- digging

Cattle

- resting
- social
- interactive play
- grooming
- chewing, rumination
- rubbing
- grazing

APPENDIX L: Activity Key

Animal: Swine

Behavior	Example of activity
exploration	compressed blocks of straw
rooting	bed of peat and branches
play	balls, traffic cones, disposable cardboard
grooming	wallowing in mud puddle
social	social group time
nesting	deep beds of straw
learning	ice blocks with food inside

Animal: Poultry

Behavior	Example of activity
perching	access to elevated perches
nesting	nest boxes w/ variety of substrate
foraging	straw bales (loose), wood shavings
play	fruits and vegetables hanging from branches, treat ball
dust bathing	beds of loose substrate (soil, etc.)
exploration	straw bales, compressed blocks of straw
social	radio sounds, interactions with humans/other animals

Animal: Rabbits

Behavior	Example of activity
exploration	plastic tubing for tunnels/cat tunnels
problem solving	treats in toilet paper roll or treat ball
interactive play	balls, egg cartons, other toys
climbing	perches, blocks of wood, phone books
foraging	greens under hay in hutch/pen
social	clicker training with humans, housed/socialized with other rabbits
digging	digging box filled with hay, shredded newspapers, etc.

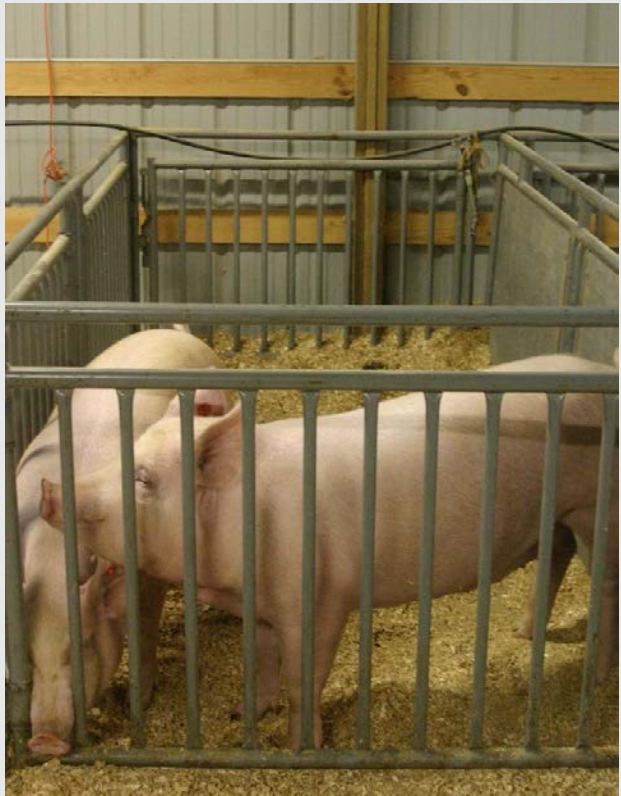
Animal: Cattle

Behavior	Example of activity
resting	provide quiet, undisturbed sites for resting (sunny or shady depends on breed)
social	visual/auditory contact with other cows/humans, group housing
interactive play	hanging Kong balls or empty plastic containers
grooming	time untied in exercise yard, mechanical/rotating brush
chewing, rumination	access to beds of dry straw
rubbing	scratching/rubbing arch
grazing	access to pasture

BB

APPENDIX BB: Cattle Housing





DD

APPENDIX DD: Poultry Housing



EE

APPENDIX EE: Rabbit Housing



4 The Importance of Human Animal Interactions

Background

There are many ways humans and animals interact, both directly and indirectly. Most direct interactions involve **domesticated** animals. For example, **companion animals**, such as dogs and cats, may live in our homes and bring us pleasure from their company through direct interactions. **Service animals**, such as guide dogs, perform specific tasks that involve, typically, some type of direct interaction with humans. Other types of interactions—some of which are direct, others which are indirect—include animals used in the **entertainment industry** (e.g., circus animals), **recreation** (e.g., horses and pack mules), and **sport** (e.g., race horses, racing dogs), as well as **research animals** that are used by the medical and pharmaceutical industries. Lastly, viewing **wild animals** can help provide humans with an appreciation of nature.

When considering **human-animal interactions**, it is important to reflect on the nature of the interaction from the standpoint of both the human and the animal. What may be a beneficial interaction to a human may be detrimental to the animal's welfare. The use of working animals, for instance, provides benefits for humans such as entertainment, therapy, and assistance with tasks. However, if humans do not take the proper precautions and provide the necessary care, the interaction may be detrimental to the animals' welfare.

Life Skills

- Head: critical thinking, decision making, keeping record, learning to learn
- Heart: accepting differences, communication, concern for others, conflict resolution, cooperation, empathy, sharing, social skills
- Hands: contributions to group effort, responsible citizenship, teamwork
- Health: character, managing feelings, self-responsibility

Next Generation Science Standards: Cross-Cutting Concepts

Patterns

- Observed patterns guide organization and classification, and prompt questions about relationships and influencing factors.

Cause and Effect: Mechanism and Prediction

- Events have causes, sometimes simple, sometimes multifaceted. Deciphering causal relationships, and the mechanisms by which they are mediated, is a major activity of science and engineering.

Concepts/Vocabulary

- **Companion animal:** Species that have a special relationship with humans, are partially or totally dependent on them, live in close proximity with people, and go a step further in bonding with their owner.
- **Domesticated animal:** An animal that has adapted to live in tame, often captive environments and rely on human support for survival.
- **Entertainment animal:** An animal used for display, performance, fighting, and/or killing with the intention of human enjoyment.
- **Food animal:** Domesticated animals that yield products useful to humans such as meat, milk, eggs, and fibers like wool, hair, hide, etc.
- **Human-Animal interaction:** When animals and humans encounter one another or work together consistently and influence each other's psychological and physiological states.
- **Recreation animal:** An animal that is used by humans in pastime, leisure, or sport in order to achieve relaxation or enjoyment.
- **Research animal:** An animal that is used for experimenting, studying, or testing purposes in order to expand or show knowledge regarding a specific area of science or teaching.
- **Service animal:** An animal that has been specifically trained to perform tasks that aid an individual with a physical, sensory, or other mental disability.
- **Wild animal:** A free-ranging animal that has not been domesticated.

4.1

Animal Welfare Proficiency 4.1: Observing and Measuring Human Animal Interactions

Getting Ready

- Make copies of the Human-Animal Interaction Photographs (Appendix A; one set of photographs per pair or small group).
- Make copies of the Human-Animal Interaction Charts (Appendix B; one copy of each chart per pair or small group).
- Provide each pair/small group with writing utensils.
- Provide one piece of flip chart paper and markers to each pair/small group.

Opening Questions/ Prompts

1. Describe different ways you interact (e.g., play, work together, and socialize) with the following types of individuals in your everyday life: friends, other peers, family members, teachers, and other people in your school or community. *Ask the youth to record their thoughts and ideas on the flip chart paper provided.*
 - a. How would you describe those human-human interactions? In your opinion, are they positive, negative, or neutral? Explain your reasoning. *Ask the youth to record their thoughts and ideas on the flip chart paper provided.*
2. Describe different ways you have seen people and animals interact with each other. *Ask the youth to record their thoughts and ideas on the flip chart paper provided.*
 - a. How would you describe those human-animal interactions? In your opinion, are they positive, negative, or neutral? Explain your reasoning. *Ask the youth to record their thoughts and ideas on the flip chart paper provided*

Procedure (Experience)

1. Instruct each pair/small group to look at each numbered photograph on Appendix A and, one photograph at a time, discuss the type of human-animal interaction they think best describes what they are observing (companion; food production; recreation; research; work/entertainment; or work/service). The pairs/small groups may reach consensus, but it's also possible that they may not. Interaction types should be recorded on Appendix B for each photograph observed.
2. Next, youth should indicate whether they think the animals shown in the photographs are domesticated or wild. This should also be indicated on Appendix B.
3. The youth should then discuss the interactions they are observing and identify them as being positive, neutral, or negative using the scale shown below. Their conclusions should be recorded on Appendix B. Please note, however, that this must be done twice: The first time they are to rate the interactions as positive, neutral, or negative from the *perspective of a human*; the second time, they are to rate the interactions from the *perspective of the animal*.

Suggested Groupings

- pairs or small groups of 2-4

Time Required

- 40-60 minutes

Materials Needed

- flip chart paper (one piece per group)
- writing utensils (markers and pens/pencils)
- scissors
- Human-Animal Interaction Photographs Sheet (Appendix A)
- *Human-Animal Interactions Charts (Appendix B)
Facilitator Tip: There are two charts: one chart is for evaluating human/animal interactions from the perspective of the animal; the other chart is for evaluating interactions from the perspective of humans.
- *Take-home surveys (Appendix C)
- * Materials provided in curriculum

4.1

Animal Welfare Proficiency 4.1: Observing and Measuring Human-Animal Interactions

Facilitator Tip: Again, the pairs/small groups may reach consensus, but it's also possible they may not. If they do not reach consensus, this should be noted and become part of a larger discussion.

- strongly positive: +++ (😊)
 - positive: ++ (😊)
 - slightly positive: + (😊)
 - neutral: 0 (😐)
 - slightly negative: - (😐)
 - negative: -- (😐)
 - strongly negative: --- (😐)
4. The pairs/small groups should continue until all photographs have been viewed and discussed and Appendix B has been completed.

Sharing, Processing, and Generalizing

1. Beginning with photograph #1, have each pair/small group share the type of human-animal interaction they associated with the image. Discuss similarities and differences between the classifications chosen.
2. Then ask each pair/small group to share their ratings from Appendix B and explain how they arrived at their ratings.
3. Ask each pair/small group whether or not they reached a rating consensus within their pair/small group. If they did not reach consensus, ask them to explain their differing opinions.

Concept and Term Discovery/Introduction

Volunteers need to ensure that the concepts and definitions of the following terms have been introduced: **companion animal, domesticated animal, entertainment animal, food production animals, human-animal interaction, recreation animal, research animal, service animal, and wild animal.** (Note: The goal is to have youth discover terms and concepts through their own exploration.)

Concept Application

1. Make copies of the surveys in Appendix C. Provide each youth with at least one set of surveys to take home.
2. Ask the youth to have a group of friends or family members work together to identify the human-animal interactions in each photograph as being positive, neutral, or negative using the scale shown. They may also provide comments using the space shown. Please note, however, just like the activity the youth completed, this must be done twice: The first time they are to rate the interactions as positive, neutral, or negative from the perspective of a human; the second time, they are to rate the interactions from the perspective of the animal.
3. Once the surveys have been completed, ask the youth to have a discussion with their friends and/or family members. Beginning with photograph #1, have them share their ratings from Appendix B and explain how they arrived at their rating. Ask them if they reached consensus or not. If they did not reach consensus, ask them to explain their differing opinions.

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APPENDIX A

Picture #1



Picture #2



Picture #3



Picture #4



Picture #5



Picture #6



A

APPENDIX A (continued)

Picture #7



Picture #8



Picture #9



Picture #10



Picture #11



Picture #12



Picture #13



Picture #14



B

APPENDIX B

Human-Animal Interactions: Human's Perspective										
Photo #	Interaction type	Animal type (circle one)	---	--	-	0	+	++	+++	Explanation
1		domesticated wild								
2		domesticated wild								
3		domesticated wild								
4		domesticated wild								
5		domesticated wild								
6		domesticated wild								
7		domesticated wild								

Please use the following interaction types:

Companion Food production Recreation Research Work/Entertainment Work/Service

B

APPENDIX B (continued)

Photo #	Interaction type	Animal type (circle one)	Human-Animal Interactions: Human's Perspective							Explanation
			---	--	-	0	+	++	+++	
8		domesticated wild								
9		domesticated wild								
10		domesticated wild								
11		domesticated wild								
12		domesticated wild								
13		domesticated wild								
14		domesticated wild								

Please use the following interaction types:

Companion Food production Recreation Research Work/Entertainment Work/Service

B

APPENDIX B (continued)

Photo #	Interaction type	Animal type (circle one)	Human-Animal Interactions: Animal's Perspective							Explanation	
			---	--	-	0	+	++	+++		
1		domesticated wild									
2		domesticated wild									
3		domesticated wild									
4		domesticated wild									
5		domesticated wild									
6		domesticated wild									
7		domesticated wild									

Please use the following interaction types:

Companion Food production Recreation Research Work/Entertainment Work/Service

APPENDIX B (continued)

Human-Animal Interactions: Animal's Perspective											
Photo #	Interaction type	Animal type (circle one)	Human-Animal Interactions: Animal's Perspective							Explanation	
			---	--	-	0	+	++	+++		
8		domesticated wild									
9		domesticated wild									
10		domesticated wild									
11		domesticated wild									
12		domesticated wild									
13		domesticated wild									
14		domesticated wild									

Please use the following interaction types:

Companion Food production Recreation Research Work/Entertainment Work/Service



APPENDIX C: Animal Welfare Survey from the Animal's Perspective

Putting yourself in the position of the animal in each photograph, rate the interaction with the humans using the scale provided. Utilize the space below each photo to explain each of your ratings.



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APPENDIX C: Animal Welfare Survey from the Animal's Perspective (continued)



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APPENDIX C: Animal Welfare Survey from the Animal's Perspective (continued)



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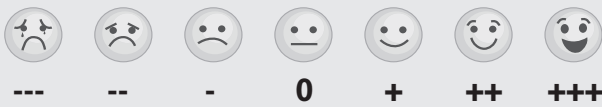
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APPENDIX C: Animal Welfare Survey from the Human's Perspective (continued)

Putting yourself in the position of the human in each photograph, rate the interaction with the animal using the scale provided. Utilize the space below each photo to explain each of your ratings.



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APPENDIX C: Animal Welfare Survey from the Human's Perspective (continued)



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APPENDIX C: Animal Welfare Survey from the Human's Perspective (continued)



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5

Assessment and Improvement

Background

A key component to understanding animal welfare is for youth to put the principles learned through this series into practice through assessment and improvement of the welfare of the animals in their care.

Over the course of the Proficiency Series, the youth have explored the following topics in depth:

1. Ethical Decision-Making
2. Animal Behavior
3. Animal Health
4. Animal Housing and Care
5. Human-Animal Interactions

Now in Proficiency 5, the youth will be asked to reflect on these topics and perform a self-assessment of their own animal care practices.

It is important to understand how to apply animal care practices that decrease the likelihood that animals will experience poor welfare and increase the likelihood that they will experience good welfare. To accomplish this, the youth will first describe the themes they have learned about during this project and reflect on their similarities and differences to the “Five Freedoms” framework. Then, they will be using a self-assessment tool based on this framework to identify strengths and weaknesses in their own animal care practices. Finally, for the take-home proficiency, youth will develop and implement a plan to make improvements to their animal care practices to enhance the welfare of their animal or animals.

For reference, here is a description of the Five Freedoms, which were developed in 1965 (Brambell Report).

1. Freedom from Hunger and Thirst by ready access to fresh water and a diet to maintain full health and vigor.
2. Freedom from Discomfort by providing an appropriate environment, including shelter and a comfortable resting area.
3. Freedom from Pain, Injury, or Disease by prevention or rapid diagnosis and treatment.
4. Freedom to Express Normal Behavior by providing sufficient space, proper facilities, and appropriate social partners.
5. Freedom from Fear and Distress by ensuring conditions and treatment that avoid mental suffering.

For more information on the Five Freedoms, see FAWC Finance, <http://www.fawc.org.uk/freedoms.htm>.

From the Progressive Cattle, http://www.progressivecattle.com/index.php?option=com_content&view=article&id=3788:the-five-freedoms-of-cattle&catid=93:featured-main-page.

Life Skills

- Head: planning/organizing, critical thinking, decision-making
- Heart: cooperation, communication
- Hands: contributions to group effort, teamwork
- Health: managing feelings

Next Generation Science Standards: Cross-Cutting Concepts

Patterns

- Observed patterns guide organization and classification, and they prompt questions about relationships and influencing factors.

Cause and Effect

- Mechanisms and Explanation: Events have causes that may be simple or multifaceted. Science involves investigating and explaining causal relationships and their mechanisms.

5.

Animal Welfare Proficiency 5.1: The Five Freedoms

Getting Ready

- Make one copy of the Five Freedoms Worksheet for each youth.
- Make one copy of the Animal Welfare Self-Assessment Tool for each youth
- Give five index cards and a writing utensil to each youth.

Opening Questions/ Prompts

1. When you think about the animals in your care and the ways that you can make sure that they have good welfare, what are some topics that you think are important?
 - a. Rather than answering aloud, ask the youth to please list one topic on each index card.

Suggested Groupings

- Individuals, then groups.

Time Required

- 45 minutes

Materials Needed

- writing utensils (one per youth)
- index cards or similarly sized pieces of paper (five per youth)
- Five Freedoms Worksheet (Appendix A)*
- Animal Welfare Self-Assessment Tool (Appendix B)*

* Materials provided in curriculum

Facilitator Tip: If the youth are stuck, ask them to review in their minds the different activities they completed and some of the main topics they learned in each activity.

5.1

Animal Welfare Proficiency 5.1: The Five Freedoms

Experience : Part 1

1. Ask the youth to go around the room and share the topics they have written on their cards.
2. Working as a team, ask the youth to organize the cards into categories or themes. **Facilitator Tip:** Encourage the youth to come up with their own categories, but if they are stuck, you can introduce example categories like good health, proper nutrition, positive human relationships, etc.
3. Ask the youth to write the categories they came up with and the topics they assigned to each category on a piece of flip chart paper.
Facilitator Tip: Topics can be put into more than one category if appropriate.
4. Hand out the Five Freedoms worksheet and ask the youth to complete it in pairs or small groups.
 - a. For each of the Five Freedoms listed, the youth should write down the topics from their brainstorming session that best fit within the category. They should save any topics that do not fit into a category for the end of the activity.
 - b. For each of the Five Freedoms, the youth should pick one of the topics they listed and come up with an example of how this topic could be put into practice.

Example: Choose one of the topics listed above and provide an example of different types of animal care practices in this category: Feeding

Example where welfare is likely to be good	Example where there is opportunity for improvement	Example where welfare is likely to be poor
<ul style="list-style-type: none"> • Food quantity is always sufficient to maintain a healthy weight and body condition. • Animal is a healthy weight. 	<ul style="list-style-type: none"> • Food quantity is not appropriate to maintain a healthy weight and body condition. • Animal is either slightly over or under weight. 	<ul style="list-style-type: none"> • Food quantity is not appropriate to maintain a healthy weight and body condition. • Animal is either very underweight or obese.

- c. Finally, the youth should review their brainstorming list and the lists they have completed for each of the Five Freedoms and determine what, if any, additional freedoms they would add to this framework. Then they will list the topics that are covered by this new freedom and provide an example of how that topic could be associated with different welfare outcomes.

5.1

Animal Welfare Proficiency 5.1: The Five Freedoms

Sharing, Processing, and Generalizing

Follow the lines of thinking developed by the youth as they share and compare their thoughts, observations, and conclusions. If necessary, use more targeted questions as prompts to get to particular points. For example:

1. How did the categories you developed compare to the Five Freedoms? How are they similar or different?
2. Please share your work for one of the Five Freedoms with the group.
Facilitator Tip: Make sure that all Five Freedoms are addressed during this sharing.
3. Please describe any additional freedoms you added to your worksheet.
4. If you were going to recommend changes to the Five Freedoms, what changes would you make?

Experience : Part 2

1. Hand out the Animal Welfare Self-Assessment Tool.
2. Ask the youth to identify one animal—or a group of animals that live together—for which they will perform the assessment.
3. Allow the youth 10 to 15 minutes to perform the self-assessment for that animal(s).
Facilitator Tip: Encourage youth to perform the assessment from the animal's point of view. For example, get down to a sheep's level to look around the environment instead of standing straight up.
4. The youth should be instructed to consider each topic listed and decide if their animal's care is best described by the information in the green, yellow, or red boxes. The green boxes describe conditions where welfare is likely to be good, the yellow boxes indicate opportunities for improvement, and the red boxes indicate that this is a topic of high priority.
5. Remind the youth to check at least one box for each section and to add any notes or comments in the right-most column.

Procedure

Facilitator:

To earn their Proficiency for this level, youth will need to develop and implement a plan to improve their animal care practice in one or more areas. To assist youth with this process, they will be following the procedures outlined in the Animal Welfare: Planning for Improvement hand out.

Please make sure that youth have their completed Animal Welfare Self-Assessment tool as well as the Animal Welfare: Planning for Improvement packet to take home with them. At the final project meeting, youth should present their plan for improvement as well as describe the steps they took to implement their plan with their animals. Including photos or videos in these presentations is encouraged.

Suggested Grouping

- Individual

Materials Needed for Each Youth

- writing utensils (one per youth)
- completed Animal Welfare Self-Assessment Tool (Appendix B)*
- Animal Welfare: Planning for Improvement Packet (Appendix C)*

* Materials provided in curriculum

A

APPENDIX A: Five Freedoms Worksheet

1. Freedom from Hunger and Thirst:

List the topics from the group's list that apply to this category:

Choose one of the topics listed above and provide an example of different types of animal care practices in this category:

Example where welfare is likely to be good	Example where there is opportunity for improvement	Example where welfare is likely to be poor

2. Freedom from Discomfort:

List the topics from the group's list that apply to this category:

Choose one of the topics listed above and provide an example of different types of animal care practices in this category:

Example where welfare is likely to be good	Example where there is opportunity for improvement	Example where welfare is likely to be poor

A

APPENDIX A (continued)

3. Freedom from Pain, Injury, or Disease:

List the topics from the group's list that apply to this category:

Choose one of the topics listed above and provide an example of different types of animal care practices in this category:

Example where welfare is likely to be good	Example where there is opportunity for improvement	Example where welfare is likely to be poor

4. Freedom to Express Normal Behavior:

List the topics from the group's list that apply to this category:

Choose one of the topics listed above and provide an example of different types of animal care practices in this category:

Example where welfare is likely to be good	Example where there is opportunity for improvement	Example where welfare is likely to be poor

A

APPENDIX A (continued)

5. Freedom from Fear and Distress:

List the topics from the group's list that apply to this category:

Choose one of the topics listed above and provide an example of different types of animal care practices in this category:

Example where welfare is likely to be good	Example where there is opportunity for improvement	Example where welfare is likely to be poor

If you could add another freedom to this list, what would it be?

List the topics from the group's list that apply to this category:

Choose one of the topics listed above and provide an example of different types of animal care practices in this category:

Example where welfare is likely to be good	Example where there is opportunity for improvement	Example where welfare is likely to be poor

B

APPENDIX B: Animal Welfare Self-Assessment Tool

The following is a self-assessment tool to help you identify how you are succeeding and where there may be opportunities for you to enhance your animal care practice. Follow each section answering each prompt by selecting the category that best applies. Add notes or explanations in column to the right. This self-assessment is only for you and should be used as a tool to keep track of and monitor your progress in animal care. It will only be useful if you are honest in your notations.

Your name: _____

Name of animal or animals assessed: _____

Date of assessment: _____

B

APPENDIX B (continuation)

Freedom from Hunger and Thirst

Fresh water	Water supply is clean, adequate, and circulated; and water supply is always available.	Water supply is occasionally clean, adequate, and circulated; or a water supply is available most of the time.	Water supply is unsanitary, inadequate, and not circulated; or a water supply is rarely available.
Food quality	Food type is always suitable for species, fresh, and free of contaminants.	Food type is occasionally suitable for species; or food is not always fresh; or food is not always free of contaminants.	Food type is rarely suitable for species; or food is rarely fresh; or food is rarely free of contaminants.
Food quantity	Food quantity is always sufficient to maintain a healthy weight and body condition. Animal is a healthy weight.	Food quantity is not appropriate to maintain a healthy weight and body condition. Animal is either slightly over or under weight.	Food quantity is not appropriate to maintain a healthy weight and body condition. Animal is either very skinny or obese.

B

APPENDIX B (continuation)

Freedom from Discomfort

Rest	The animal always has access to a comfortable resting place such as bedding, a soft floor space, or a nesting area.	The animal sometimes has access to a comfortable resting place such as bedding, a soft floor space, or a nesting area.	The animal never has access to a comfortable resting place such as bedding, a soft floor space, or a nesting area.
Shelter	Access to shelter is suitable for type, age, and condition of animal. Shelter is always available.	Access to shelter is somewhat suitable for type, age, and condition of animal. Shelter is occasionally available.	Access to shelter is not suitable for type, age, and condition of animal. Shelter is rarely available.
Ventilation	The shelter area is sufficiently ventilated, always providing fresh air for the animal.	The shelter area is semi-ventilated, occasionally providing fresh air for the animal.	The shelter area is not ventilated, rarely providing fresh air for the animal.
Protection from weather	Always present: <ul style="list-style-type: none"> • protection from extreme weather (e.g., heat/cold; precipitation) • animal(s) ability to maintain normal body heat 	Occasionally present: <ul style="list-style-type: none"> • protection from extreme weather (e.g., heat/cold; precipitation) • animal(s) ability to maintain normal body heat 	Rarely present: <ul style="list-style-type: none"> • protection from extreme weather (e.g., heat/cold; precipitation) • animal(s) ability to maintain normal body heat
Sanitation	Living area is cleaned regularly; bedding and flooring not soiled. Sleep/eating area is removed from waste area.	Living area is cleaned occasionally; bedding and flooring soiled occasionally. Sleep/eating area is in proximity to waste area.	Living area is cleaned rarely; bedding and flooring soiled frequently. Sleep/eating area and waste area not separated.
Grooming	Grooming is done properly and frequently. Animal is kept clean.	Grooming is done occasionally. Animal is not always clean.	Grooming is rarely done. Animal is rarely clean.

B

APPENDIX B (continuation)

Freedom from Pain, Injury, or Disease			
Vaccinations	All necessary vaccinations; vaccinations are current.	Some necessary vaccinations; vaccinations are current.	Few/no necessary vaccinations; vaccinations are not current.
Veterinary care	Regular health checks with a licensed veterinarian.	Occasional health checks with a licensed veterinarian.	Few/no health checks with a licensed veterinarian.
Health checks	You frequently perform head-to-tail health checks.	You occasionally perform head-to-tail health checks	You rarely/never perform head-to-tail health checks.
Skin, fur, coat, feather condition	Animal is free of fleas or other external parasites. Animal does not have skin lesions, cuts, or sores.	Animal is not always free of fleas and external parasites. Animal has minor lesions, cuts or sores.	Animal has fleas and external parasites. Animal has more than one lesion, cut, or sore.
Administration of medical treatment	Medical treatment is given immediately whenever needed, and treatment is done properly and humanely.	Medical treatment is not always given when needed, or treatment is not always done properly and humanely.	Medical treatment is rarely or never given when needed, or treatment is not done properly and humanely.
Injury	Shelter is free of objects and hazards that could be potentially harmful.	Shelter has a few objects and hazards that could be potentially harmful.	Shelter is hazardous and full of objects that could be potentially harmful.

B

APPENDIX B (continuation)

Freedom from Fear and Distress

Transportation	Animal is always transported humanely and with care. Animal is provided with enough space to be comfortable while being transported. Transportation is done in a way that is least stressful for the animal.	Animal is not always transported humanely and with care. Animal is not as comfortable as it can be while being transported. Transportation is not done in a way that is least stressful for the animal.	Animal is not transported humanely and with care. Animal is confined and not provided with enough space to be comfortable while being transported. The animal's stress level is disregarded during transportation.
Handling	Animal is handled humanely and in a way that is appropriate to its type. Animal is handled in a way that is safe to the handler and the animal.	Animal is not always handled humanely and in a way that is appropriate to its type. Animal is not always handled in a safe way.	Animal is never handled in an appropriate or safe way.

B

APPENDIX B: Animal Planning for Improvement

Once you have identified the opportunities to enhance your animal care practice, it is important to make plans to address them. By making positive changes, your animal care practice can be improved, and the likelihood that your animal will experience good welfare can be increased. This process involves making a plan, identifying the total investment required to make the desired changes, and implementing the changes. Investments come in the form of money, time, and supplies, and they should all be considered when developing a plan to enhance animal care.

When deciding how to address areas of concern, you can complete a cost-benefit analysis. This process is used to compare the expected investments of a project (cost) to the expected positive outcomes (benefit). By carefully planning improvements for an animal's environment, we can reduce the risk of poor animal welfare while minimizing the potential costs of those plans.

To begin, make sure you have your completed Animal Welfare Self-Assessment Tool, a copy of the **Planning Table**, and **two copies of the Detailed Plan Template**. You will also need a writing utensil.

Step 1: On your Animal Welfare Self-Assessment Tool, please circle all areas where you chose red or yellow as your response.

Step 2: For each red or yellow area, fill in the Planning Table. First identify the problem, then create a brief plan that would help improve the situation, and estimate the total investment involved in your plan. This investment should include resources and time required to make the changes. This table is only a rough outline, so the plans and estimates do not need to be precise. Fill in your information below the examples provided.

Step 3: Of all the topics included in your planning table, choose two areas for which you want to make a detailed plan.

Step 4: Using the Detailed Plan template, develop detailed plans for enhancing your practice in order to improve your animal's welfare. At this point, your outlines should be expanded to include more details, including more specific estimates of investment and a better articulated plan of implementation.

Step 5: Review your plans with a parent or guardian, and get their permission to complete one of the plans.

Step 6: Implement your plan. Taking photos or videos before and after you put your plan into place is encouraged.

Step 7: Attend your group meeting and give a presentation that includes a description of your two detailed plans as well as the story of how you went about implementing your plan. Use your detailed planning template to help develop your presentation, including any photos or videos you took during the process.

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APPENDIX BB: Planning Chart (example)

Topic	General plan	Estimated investment
Water supply is not available at all times. Available water is often dirty.	Provide more water troughs for the animal in more locations. Change water more frequently.	More water troughs needed. Time needed to fill troughs.
Animal's pen is uncovered and does not protect from extreme weather conditions.	Build an overhang over the pen to block animal from sun, rain, etc.	Construction supplies needed. Help with construction needed. Time needed to build the overhang.
Living area is very frequently soiled. Waste is often found around the eating area.	Change bedding more often. Clean up waste found near food and sleeping area.	More bedding needed. Time needed to change bedding. Time needed to clean up waste.

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APPENDIX BB: Planning Chart

Topic	General plan	Estimated investment

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APPENDIX BB: Detailed Planning Template (Example)

Describe the issue

There is only one water trough available to the animal during the day. The only available water trough is frequently empty or dirty. There is no water available to animal during the night in the sleeping pen or during the day when the animal is out in the field.

Describe your detailed plan

1. Buy two extra water troughs to put in sleeping pen and in the enclosed field.
2. Check each water trough every few hours to make sure troughs are filled with enough water.
3. Change water in troughs frequently to make sure water is uncontaminated and sanitary.

Describe the investment required (include money, supplies, help from friends and parents, etc.)

- ride needed to get new troughs
- adult's help needed to install the new troughs
- time needed to buy and install new troughs
- time spent daily refilling and changing water troughs
- two gallon troughs = \$180

Describe the expected benefits and potential challenges of this plan

I expect that my animal will be much happier when he has easier access to water. I also expect that he will be healthier by drinking cleaner water.

The biggest challenge with this plan is the cost of the water troughs. Water troughs can be expensive, but it is important for animals to always have access to clean water. It is a lot of money up front, but this is a one-time cost, assuming that the troughs do not need to be replaced or repaired.

My plan to improve water quality and access does not stop with buying the troughs; it is an ongoing project. I will also need to make sure I check and change the water frequently. I expect that it will be challenging and laborious to refill and change the water, but it is important to my animal's health.

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APPENDIX BB: Detailed Planning Template

Describe the issue

Describe your detailed plan

Describe the investment required (include money, supplies, help from friends and parents, etc.)

Describe the expected benefits and potential challenges of this plan

Please make sure your final presentation includes the following information:

1. Name and species of the animal or animals for which you completed this activity.
2. Describe the issue you decided to address.
3. Describe why this problem was important to you and your animal.
4. Describe your plan, the materials you used, and the steps you took to achieve your goal.
5. Explain any challenges you faced in implementing your plan.
6. Explain any observations you made of your animal after implementing your plan, and compare those observations to how things were before.
7. Share your advice with the group for implementing a plan like you did.
8. Share any photos or videos of your process.

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