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<https://escholarship.org/uc/item/13k794s5>

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Publication Date

2009-03-01

DOI

10.3733/ucanr.8337

Peer reviewed



YOUTH DEVELOPMENT THROUGH VETERINARY SCIENCE I

Behaving Like Animals!

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Subject Overview and Background Information

Animals play important roles in the lives of humans. Animals have been used for centuries for work, such as in helping to plow fields, providing a means of transportation and aiding in search and rescue, and as a source of food and other products for humans. Many people have companion animals—dogs and cats are among the most popular—in their homes. Because we depend upon animals in so many ways, it is important that we, as their caretakers, understand their biology and their **behavior** in order to assess their health and well-being.

While a normal part of responsible animal care involves preventative veterinary care, including annual exams with vaccinations and blood tests, many common injuries and illnesses can be detected just by noticing a change in the behavior of an animal. Because behavior is a primary means of communication, a change in an animal's activity level, eating habits, **posture**, or **gait** can often "tell" us something important and be a clue to detect or prevent an illness or injury.



By making careful observations and developing an **ethogram** (a description of an animal's behavior), we can learn to recognize the range of behaviors performed by different kinds of animals as well as by different individuals of the same animal type. Through this process, we will come to understand how animals react or respond to different conditions (e.g., changes in weather) or stimuli (e.g., loud noises), and what types of behaviors might indicate that something is wrong with our animals.

Sometimes symptoms of diseases or injuries are not always obvious, and detection depends on how closely we observe our animals and how well we understand their behaviors.

◆ Activity Concepts and Vocabulary

- **Animal behavior:** A branch of biology that studies the behavior of animals.
- **Ethogram (ee-thuh-gram):** A description of the types of behaviors performed by the species you are studying.
- **Gait:** The manner or style of walking.
- **Posture:** The way someone holds up his or her body, especially in a standing position.

◆ Life Skills

- **Head:** Keeping records
- **Heart:** Cooperation, social skills, communication, sharing
- **Hands:** Teamwork, contribution to group effort

◆ Subject Links

Science and Language Arts

◆ State Content Standards

Science

- Grade 4
 - *Investigation and Experimentation: 6a*
- Grade 5
 - *Investigation and Experimentation: 6g, 6h*

Language Arts

- Grade 3
 - *Writing Applications: 2.2*
 - *Speaking Applications: 2.3*
- Grade 4
 - *Listening and Speaking Strategies: 1.7, 1.8*
- Grade 5
 - *Listening and Speaking Strategies: 1.1, 1.5, 1.6*
- Grade 6
 - *Listening and Speaking Strategies: 1.5*

◆ Purpose of Activity

To introduce youth to the art and science of observing animal behaviors.

ACTIVITY

Behaving Like Animals!

Overview of the Activity



One group of youth will act out a scenario that includes examples of a variety of types of behavior. At the same time, another group of youth will observe the behavior of their peers as if they were observing a group of animals. These youth will record their observations in a table (ethogram) and make inferences about the types of behavior they observed. The groups will then switch roles so everyone has a chance to act and observe.

◆ Time Required

40 to 60 minutes

◆ Suggested Grouping

Small groups

◆ Materials Needed

(*Materials provided in the curriculum)

- *Ethograms: Feeding time ethogram, playtime ethogram, general ethogram
- *Behavior scenario cards
- One small box (e.g., a shoe box)
- Small scraps of paper (enough to fill a shoe box)
- One tennis ball, whiffle ball, or other plastic or cloth ball of similar size
- Flip chart paper
- Markers

◆ Getting Ready

- Make a copy of the behavior scenario cards for both scenarios; cut them into individual cards.
- Make copies of the ethograms and provide one set of ethograms per youth.
- Divide youth into small groups of 4, 6, or 8.
- Provide each group with flip chart paper and markers.
- Cut up paper or find scraps of paper to be used as “food” for the feeding behavior scenario. Place the scraps in a shoe box or other small container that will serve as a food trough.

Opening Questions

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

1. What does the term “behavior” mean to you?
2. Using the flip chart paper provided, make a list of 4 to 5 behaviors that humans typically demonstrate.
3. Why do you think animals exhibit different behaviors? What do you think the purposes of these behaviors might be?
4. What are some different behaviors you have seen in animals? Generate a list of 4 to 5 behaviors that you have seen animals demonstrate.

- **Volunteer Tip:** Encourage youth to make lists of behaviors of different animals and compare the lists.
- 5. Explain how you think some animal behaviors are similar to human behaviors. How are some behaviors different?
- 6. If you have an animal at home, can you describe a situation where your animal has behaved in a way that was not typical? What do you think might have caused this behavior? What did you do when you noticed the behavior?.

Procedure (Experiencing)

1. Form two groups. The first group will be the performers and the second group will be the observers.
2. Give each performer a behavior scenario card from Scenario A and have them read it carefully to themselves. The behavior cards provide the youth with specific directions for the behaviors of their animal.
 - **Volunteer Tip:** Make sure that everyone in the group understands the behaviors they are to perform and feels comfortable enough to do so.
3. The youth who are not performing will be the observers. Provide all of the observers with a copy of the ethogram for Scenario A. Assign each observer one performer to observe.
4. Explain to the youth who are the observers that they are to concentrate on the behaviors of their assigned “animal” only and record their observations on the ethogram.
 - **Volunteer Tip:** Make certain that the youth who are the observers know which performer they are to observe.
5. Set up the “food trough” needed for the feeding time scenario (Scenario A) and allow the youth to perform for a maximum of 3 minutes.
6. Switch the groups so that the performers are now the observers and repeat the procedure using Scenario B. Scenario B is a Playtime Scenario, so you will need to provide the youth with a ball to use. Again, allow the youth to perform up to 3 minutes.

Sharing, Processing, and Generalizing

Have each group of youth review their ethograms and come up with some general statements about the group of animals they observed. Follow the lines of thinking developed by the youth as they share and compare their thoughts, ideas, and observations. If necessary, use more targeted questions as prompts to get to particular points, such as:

1. What common behaviors did they observe?
2. What unique or unusual behaviors did they observe?
3. Have each group describe the process that led them to their ideas and inferences or conclusions regarding their observations.

Concept and Term Introduction

Volunteers need to ensure that the concepts and terms **animal behavior**, **ethogram**, **gait**, and **posture** have been introduced.

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

Concept Application

1. Using the general ethogram, observe an animal (pet, project animal, wild animal, or zoo animal) for 3 to 5 days. If you choose to observe a pet or project animal, make observations at different times of each day (e.g., morning, noon, and evening).
2. At the end of the 3- to 5-day time period, use the data recorded on the ethograms to identify common behaviors of that animal. What can you learn about this animal from these behaviors? How might these behaviors help you understand the health and well-being of the animal?

References

- Alcock, J. 2005. *Animal behavior: An evolutionary approach*. 8th ed. Sunderland, MA: Sinauer Associates.
- Bolhuis, J., and L. Giraldeu, eds. 2005. *The behavior of animals: Mechanisms, function and evolution*. Malden, MA: Blackwell.
- Keeling, L. A., and H. Gonyou, eds. 2001. *Social behavior in farm animals*. New York: CABI.

BEHAVIOR SCENARIO CARDS**Scenario : Feeding Time**

It's time to eat! There will be a "food trough" (shoe box) in the middle of the room for the "animals" in this scenario.

Everyone in the Feeding Time animal group will begin by standing at one end of the room. Once the skit starts, each participant is to act out the behavior(s) specified on the card they were given.

- **Volunteer Tip:** To pretend they are eating, the youth should remove one piece of "food" from the trough at a time, bring it to their mouth, and act as if they chew it before they remove another piece.

Feeding Time Behavior Cards

Behavior 1: Aggressive: You are very hungry. Once the skit begins, run to the food trough and begin eating very fast! If there are too many others at the food trough, try to scare them away by shouting (do not use any words, just noises) or making menacing movements toward them.

Volunteer Tip: *No more than one "Aggressive" animal per group.*


Behavior 2: Timid: You are hungry but very timid. Begin by walking very slowly toward the food trough, looking left and right to make certain you aren't too close to the others. Once you reach the trough, eat very slowly, examining each piece of food before consuming it. If you decide that the food is good to eat, eat very slowly while looking around you. If another animal tries to scare you away, run away to a corner of the room.

Volunteer Tip: *No more than two "Timid" animals per group.*



Behavior 3: *Hungry, but injured:*

You are hungry, but you have an injured leg. Begin by walking toward the food trough slowly but with a noticeable limp. When you get about halfway to the trough, stop, moan, and rub a spot on your leg. Continue to moan and rub your leg every once in a while, even when you reach the food trough and start eating. If someone tries to scare you away, attempt to flee, but keep limping.

Volunteer Tip: *No more than one "Hungry, but injured" animal per group.*


Behavior 4: *Skin Irritation:* You are hungry, but something is making your skin or coat itchy. You move toward the food trough, but every two to three steps, you have to stop and scratch your skin. Once you get to the food trough, this continues. You have to scratch yourself between each piece of food.

Volunteer Tip: *No more than one "Skin Irritation" animal per group.*


Behavior 5: *Typical:* You are hungry but not overly aggressive or timid. Walk toward the food trough. Once you get there, examine the food and then eat slowly. After you are done, move away from the food trough and sit down.

Volunteer Tip: *The remaining youth represent animals in the "Typical" group.*

Scenario **B**: Playtime

It's playtime! The "animals" in the playtime scenario will play catch with one another. However, not every animal has the same interest or ability. Each youth in the skit will receive one behavior card, will read it carefully, and will demonstrate the behaviors of that animal. All of the youth who are not in the skit will be provided with an ethogram and assigned one "animal" to observe. Observers are to

concentrate on the behaviors of that animal only and record their observations on the ethogram.

Everyone in the playtime skit animal group will begin by standing in a circle. Once the skit starts, they are to act out the behavior(s) of the animal they were given.

- **Volunteer Tip:** Have the "Interested" animal start the game of catch.

Playtime Behavior Cards

Behavior 1: *Uninterested:* You have a stomach ache and a headache and aren't feeling very playful today. You should spend most of your time trying to rest or find a spot to lie down and keep away from the noise of the game.

Volunteer Tip: No more than one "Uninterested" animal per group.

Behavior 2: *Very Interested:* You are feeling very eager to play. When the ball comes near, you should take it and eagerly try to continue the game. You should also run and jump around and try to get others to play with you.

Volunteer Tip: No more than one "Very Interested" animal per group.

Behavior 3: *Somewhat Interested:* You are feeling very hot, making you feel lazy and not very interested in playing the game. You will catch the ball and throw it others a little bit, but don't run around or move too much. Try to keep cool by resting.

Volunteer Tip: No more than one "Somewhat Interested" animal per group.

Behavior 4: *Interested, but Injured:* You want to play in the game and are having a good time, but you have an arm injury that makes it hard for you to catch and throw. When the ball is thrown to you, you may only use your weak arm (left arm if you are a right-handed, right arm if you are a left-handed) to catch and throw. When you move your injured arm it is painful. Never use your injured arm to catch or throw.

Volunteer Tip: *No more than one “Interested, but Injured” animal per group.*

Behavior 5: *Interested:* You want to play in the game. You will catch the ball when thrown to you and then toss it to someone else after you catch it. When someone else has the ball, you should hold out your hands (do not speak) to encourage them to throw the ball to you.

Volunteer Tip: *The remaining youth represent animals in the “Interested” group.*

SCENARIO  : FEEDING TIME ETHOGRAM

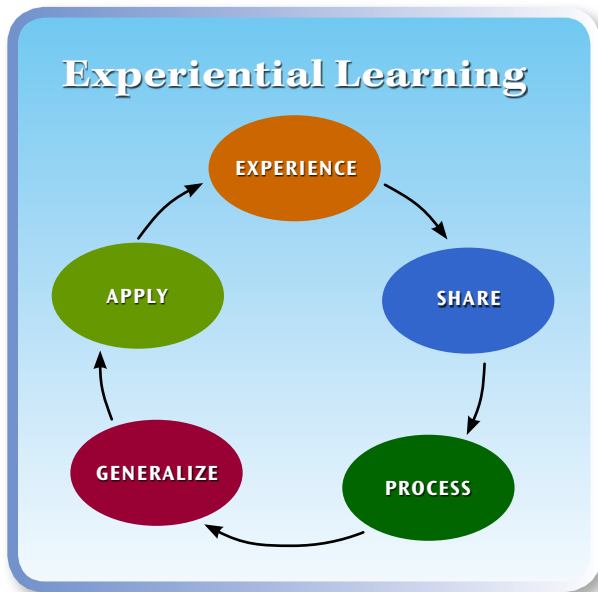
Behavior	Describe your observations of each type of behavior
<p>Feeding: Behaviors related to food, such as looking for food; sniffing food; eating food; holding food; approaching feeding area.</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Aggressiveness: Behaviors related to aggression, such as chasing; attacking; growling.</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Vocalization: Sounds the animals make.</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Movement: Motions the animals make, such as walking; running; limping; jumping; hopping; flying; stalking.</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Other: Other behaviors you observe, such as scratching; grooming; sitting; sleeping; playing.</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

SCENARIO B : PLAYTIME ETHOGRAM

Behavior	Describe your observations of each type of behavior
<p>Movement: <i>Motions the animals make, such as walking; running; limping; jumping; hopping; flying; stalking.</i></p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Playfulness: <i>Describe how your animal plays.</i></p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Vocalization: <i>Sounds the animals make.</i></p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Social Interactions: <i>Chasing; grooming; playing; fighting; communicating.</i></p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Other: <i>Other behaviors you observe, such as scratching; grooming; sitting; sleeping; playing.</i></p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

APPENDIX

The activity in this curriculum was designed around inquiry and experiential learning. Inquiry is a learner-centered approach in which individuals are problem solvers investigating questions through active engagement, observing and manipulating objects and phenomena, and acquiring or discovering knowledge. Experiential learning (EL) is a foundational educational strategy used in 4-H. In it, the learner has an experience phase of engagement in an activity, a reflection phase in which observations and reactions are shared and discussed, and an application phase in which new knowledge and skills are applied to a real-life setting. In 4-H, an EL model that uses a 5-step learning cycle is most commonly used. These five steps—Exploration, Sharing, Processing, Generalizing, and Application—are part of a recurring process that helps build learner understanding over time.



For more information on inquiry, EL and the 5-step learning cycle, please visit the University of California's Science, Technology, Environmental Literacy Workgroup's Experiential Learning Web site, <http://www.experientiallearning.ucdavis.edu/default.shtml>.

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Publication 8337
ISBN-13: 978-1-60107-582-6

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This publication has been anonymously peer reviewed for technical accuracy by University of California scientists and other qualified professionals. This review process was managed by the ANR Associate Editor for Human and Community—Youth Development.