

SciGirls Activity 8

Animal Ears



Icebreaker

Observe how an animal responds to its own reflection.

SciGirls Skill: Observing

Guide your girls as they

- 1) Put the cage or aquarium on a table top away from other visual distractions. This activity works best with only one animal in the container.
- 2) Observe the animal for 5 minutes. Observe from a slight distance, such as 6 feet. Develop a number scale to describe how active the animal is (1 = resting, 5 = very active or agitated). Write descriptive words that represent the animal's behaviors.
- 3) Place a mirror tile up to the creature's cage or aquarium. Observe the animal from the same distance as before, for 5 minutes. Use the number scale to describe the animal's activity level. Write descriptive words that represent the animal's behaviors.
- 4) Compare the results. Did the animal seem interested in its reflection? Was there an obvious change in behavior with the mirror present?



You'll need:

- a small animal in a cage or aquarium (e.g., goldfish, gerbil, mouse, lizard, bird)
- a mirror, such as a 12" x 12" mirror tile
- a notebook



SciGirls Suggestion: Territorial "loner" animals often respond more intensely to their reflections than do social creatures, or those that live in groups. Look for these differences.



Find out more about animal investigations at pbskidsgo.org/dragonflytv/show/livingthings.html

Investigation

Animal Ears

We're Ting and Mallory, and we're all about horsing around! We've heard that our equine friends actually communicate with their ears. We wanted to find out whether putting on fake horse ears will allow us to communicate with the animals. You can try the same kind of investigation with your favorite horse, dog, or cat. How will our pet respond to ear position signals?



For each group of three girls, you'll need:

- fabric to make a headband with animal-shaped ears
- Velcro fasteners
- scissors for cutting fabric
- a notebook
- an appropriate snack for the animal under study
- access to a horse, dog, or cat
- **SAFETY NOTE:** The animal ought to be familiar with the girl already. An adult handler must be present if working with a horse or even a large dog.



Find out more about Ting and Mallory's investigation at pbskidsgo.org/dragonflytv/show/horse_ears.html



Check out this investigation on the SciGirls DVD. Select "Animal Ears" from the main menu.



SciGirls Want to Know

How will our pet respond to ear position signals?

Guide your girls as they

- 1) Fashion a headband with large (even oversized) ears, similar in shape to those of the animal they are going to observe.
- 2) Use Velcro fasteners to attach the ears to the headband. Make it possible to attach the ears to the headband in various configurations (forward facing, back facing, standing high, lying flat).
- 3) When the headband is ready, prepare to make three sets of observations of the animal. One girl should handle the animal's leash or reins as a second girl prepares to present a food snack to the animal. The third girl records observations in the notebook.
- 4) Observe the animal's behaviors when the "snack girl" brings a snack, not wearing the headband. The snack girl should not speak to the animal, but simply approach slowly, offer the snack, and hold still for a minute. The snack girl then leaves the area.
- 5) The snack girl puts on the head band with ears in a distinctive position (e.g., forward facing, up tall), and prepares to approach the animal with a snack. Again, she should approach quietly (without talking) and calmly. She presents the snack, and holds still for about a minute, then leaves the area. The note taker writes down observations of the animal's behavior.
- 6) Finally, the snack girl re-attaches the ears in a third distinct position (e.g., backward facing, laying down). Again, she enters the room slowly and calmly, without talking to the animal, and presents the snack. After a minute, she leaves the area. The note taker records observations of the animal's behavior.



SciGirls Secret

Even though the animal is familiar with the snack girl, the presence of the headband with the fake ears can be just unusual enough to make the animal uncomfortable, or at least curious. If the animal starts to show overly aggressive behavior, have the snack girl leave the area immediately, and give the animal time to calm down and become at ease in the environment once again.



SciGirls Synthesize Data and Analysis

- 1) Develop categories of behavior and put observations into the appropriate category. Categories might include *friendly*, *unfriendly*, *calm*, *active*. Observation words could be things like *growls*, *whinnies*, *nudges*, *sniffs*, *jumps*, *backs away*, etc. Especially look to see if the animal's own ear position changes in each case.
- 2) Make an overall evaluation of the animal's behavior in each of the three observations. Pick the category that best represents the animal's behavior in each case.

Example:

Observation #	Fake ear position	Overall animal response
1	no ears	friendly, active
2	ears tall, forward	friendly, active
3	ears back, low	unfriendly, active

Keep Exploring!

Do you think wearing the fake ears would result in the same response if the snack girl also spoke to the animal? You can try the experiment again, having the snack girl speak the same words, in the same tone of voice, in each of the trials. Maybe voice communication carries more weight than ear signals. Develop an investigation to find out.