

# SciGirls Activity 7

## Right or Left?!



### Icebreaker: Create a long-lasting Super Spinner!

SciGirls Skill: Experimenting

#### Guide your girls as they:

- 1) Cut a circle out of construction paper, about the size of a DVD or CD.
- 2) Tape a film canister lid to the center of the paper circle.
- 3) Ask an adult to help you poke or drill a hole through the film canister lid.
- 4) Poke the skewer through the hole in the lid. Keep the paper circle near the point of the skewer. Give the skewer a twirl.
- 5) Try different sizes of paper circle, or even try an unusable CD or DVD. Have a contest to see who can make the longest spinning spinner!



**SciGirls Suggestion:** Each girl can build her own Super Spinner with these simple materials.

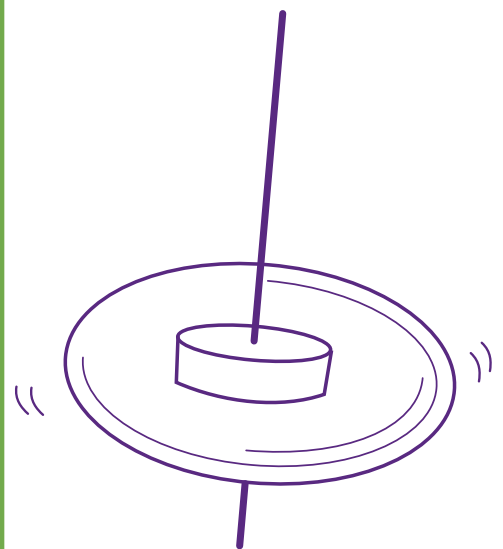


For more information on this science activity, spin on over to [pbskids.org/dragonflytv/superdoit/superspinner.html](http://pbskids.org/dragonflytv/superdoit/superspinner.html)



#### You'll need:

- a film canister lid
- construction paper
- a bamboo skewer
- tape
- scissors



## Investigation:

### Pet Handedness

Girls learn about cats as they explore handedness, or "paw preference."

We're Cleo, Brittney, and Molly. We all know that people are either right- or left-handed, but we wondered if that goes for cats too. Why wouldn't they have their own paw preference? They have their own personalities. They even have their own "meows!" Our SciGirls question: **Do cats show a paw preference?**



#### You'll need:

- pet treats
- peanut butter
- clear plastic cylinder
- cat dangly toy
- CATS!



For more information on this purrrr-fect investigation, visit [pbskids.org/dragonflytv/show/pethandedness.html](http://pbskids.org/dragonflytv/show/pethandedness.html). Then surf to [pbskids.org/dragonflytv/contact/index.html](http://pbskids.org/dragonflytv/contact/index.html) to tell us more about your own investigation!



Check out this investigation on Tape 1, Segment 7.



## SciGirls Want to Know: How can I tell if my pet prefers its right or left paw?

Guide your girls as they:

- 1) Choose "test cats," and develop three activities which make a cat use its paw. The DFTV girls decided to have their cats: 1) reach for a pet treat inside a clear plastic cylinder; 2) swipe at a cat dangly toy; 3) clean a small dab of peanut butter off the bridge of their noses.
- 2) Prepare the first test by finding a clear cylinder, approximately 4 cm in diameter and 15 cm long (a small soda bottle with both ends removed would work well). Place a few cat treats inside the tube, near the end but inside far enough so the cat will have to reach for it with its paw. Show the cat the treats in the tube, and count the first ten attempts to get the treat out of the tube, noting which paw it used.
- 3) Set up the second test, which just involves dangling a cat toy, such as a stuffed mouse on a string, in front of the cat, and watching the cat swipe at it with its paw. Count the first ten swipes, noting which paw the cat used.
- 4) Do the third test, which relates to grooming. Place a small dab of peanut butter on the bridge of the cat's nose. Count the cat's first ten attempts to remove the peanut butter, noting which paw it used.



### SciGirls Secret:

Girls who care for pets understand that they have an important role, but did your girls know that pets can help humans as well? Have your girls research local organizations that feature "service animals," such as dogs who assist the hearing- or vision-impaired, or pets that are used for therapeutic purposes at hospitals or nursing homes. Their results can act as a springboard for more cool inquiry (e.g. how are these pets trained, or why are they so effective?).



**SciGirls Suggestion:** Remember to record the results of each test for each cat in individual or group notebooks!



## SciGirls Synthesize: Data and Analysis

Tally the number of uses of each paw for each cat in each test. Here are the DFTV girls' results; you can use them as a guide.

Cat	Treat Tube	Dangly Toy	Peanut Butter Nose
Brooklyn	8-right 2-left	3-right 7-left	3-right 7-left
Nudge	no data	1-right 9-left	no data
Cle-Cle	no data	9-right 1-left	5-right 5-left

See Appendix A for a graphing example.

### Conclusion:

Cleo, Brittny, and Molly found that while it's possible to count the number of uses of each paw in each test, it is difficult to reach a conclusion that any individual cat has a specific paw preference. In the case of Brooklyn, she preferred her right paw when reaching in the tube, while the left paw was preferred for the other two tests. Results were also mixed for Cle-Cle and Nudge. The results of this investigation indicate that cats generally do not exhibit a paw preference, and at most may exhibit a paw preference in some limited activities. Did you find something different? Analyze your results, and see if you agree with the DFTV girls' findings.

## Keep Exploring!

Test your dog's problem-solving abilities with some simple tests. Record how much time it takes your pet to complete these four tests: A) crawl out from under a blanket; B) find a treat under a blanket; C) find a treat under a cup; D) find a treat under a low shelf. When you hide the treat, let your dog see you do it. Use a stopwatch to measure the time until the dog gets the treat in its mouth. Get your friend's dog involved, too, and do a comparison. Do big dogs perform better than little dogs in some tests? How does the shape of the dog's snout affect its ability to complete the tests? Does it matter what time of day you try the test?