

# set It straight

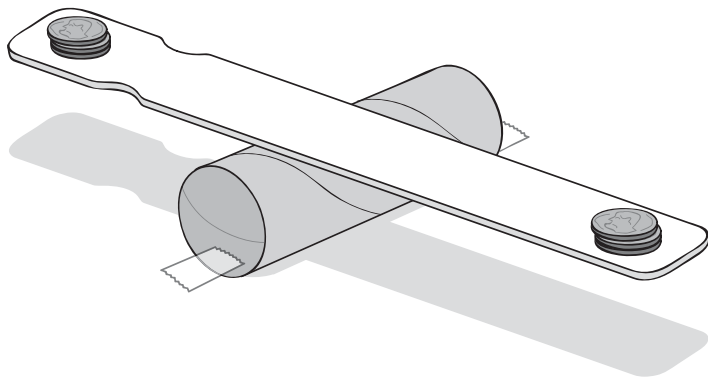
What do you get when you put a toilet-paper tube and a ruler together? I don't know either, but let's try it! Today, you'll build a tabletop seesaw and teach it some new tricks. Who ever thought seesaws could be so tricky?

## What to Do

### 1 get what You need.

- Seesaw platform (e.g., ruler, paint stirrer, large craft stick, or yardstick)
- Tape
- Toilet-paper tube
- Weights (e.g., pennies or metal washers)

**2 build Your seesaw.** Tape the toilet-paper tube to the table as shown. This is your **fulcrum**, the point where your platform rests. Then balance your seesaw platform on top. Adjust the platform until it's parallel to the tabletop.



**3 Try these challenges.** The goal of each challenge is to have the platform be level, sitting parallel to the tabletop. Once it's level, we say it's balancing.

Before you start, here are three hints.

- (1) It's okay to have the platform touch the table while you're working on a challenge.
- (2) It's okay to move the platform and change where it touches the fulcrum.
- (3) The weights don't have to be stacked or placed together on the platform.

- Put three weights on each end of the platform.
- Put three weights on one side of the platform and six weights on the other.
- Set the platform so one end sticks out twice as far beyond the fulcrum as the other end. Add weights until the platform is level.
- Put ten weights on one end of the platform and NONE on the other end.

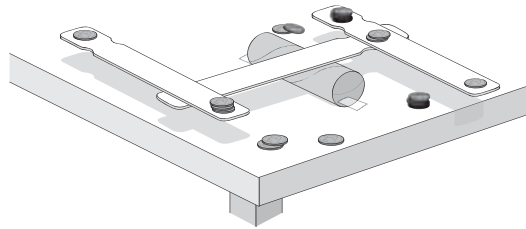
**Fetch!**  
with  
Ruff  
Ruffman™

### chew on This

With balancing, it's not just weight that matters. Position matters, too. Two things help keep your seesaw balanced: weight and distance. *Weight* is how much weight there is on each side of the fulcrum. *Distance* is how far each weight is from the fulcrum. Together, weight and distance create *leverage*. That's why, with your seesaw, you can balance a stack of pennies close to the fulcrum on one side with just one penny far from the fulcrum on the other side. Even though the single penny has only a little weight, it's far from the fulcrum, giving it a large amount of leverage.

# Dig Deeper

\* Make a multi-platform seesaw. See what kind of wacky balance systems you can make by adjusting the positions of the platforms and the number of weights.



\* Make a mobile using string, pencils, and small objects. Adjust the weights and position of the strings so that the pencils hang parallel to the floor.

\* Like balancing things? Get the Pencil Balance challenge from the ZOOM Web site at [pbskids.org/zoom/activities](http://pbskids.org/zoom/activities).



Watch FETCH! on PBS KIDS GO! (check local listings) and visit the FETCH! Web site at [pbskidsgo.org/fetch](http://pbskidsgo.org/fetch).

Hello, Big Top Circus? Have I got an act for you! Imagine me, a handsome dog, walking gracefully in perfect balance across a tightrope above the heads of the crowd. A real show stopper!



greendog

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Fold

Fetch!

# Set It Straight

Charlene, the poodle next door, barely knows I exist. But I bet if I were the first tightrope-walking circus dog, THAT would get her attention! But balancing is trickier that I thought. I know! You can do some research to help me with this stunt.

GOOO  
FETCH!

