



Children's Museum of Houston

## Balance Challenge

**Strike a balance by manipulating an object's center of gravity.**

### **What you need**

- Wood cylinder
- Craft sticks

### **What to do**

1. Tape the wood cylinder to the counter.
2. Balance one craft stick on the cylinder.
3. Add craft sticks to the one already on the cylinder, getting them to balance.
4. Continue adding sticks and maintaining balance. (Do you need to have the same number of sticks to each side of the cylinder for balance? How can you create a balance by adding sticks to only one side?)

### **Learn More Together**

To strike a balance with these objects, we must clearly understand the object's *center of gravity*, or the point in the object through which the Earth's gravitational force acts and around which the body's weight is evenly balanced. In this manipulation, if the *fulcrum*, or the point where the first craft stick is touching the cylinder, is in the center, then the weight on each side must be equal. If the fulcrum is not in the center, however, the weight will need to be distributed unequally to adjust to the center of gravity.

Attempt to create a balance with the craft sticks again, but this time, grossly changing the center of gravity.