David and Goliath
Can a button lift a stone?

**What to do:** Thread the string through the spool so about two-thirds of the string is above it. Then tie the button to one end of the string and the stone to the other end. With the button toward the top and the stone toward the bottom, hold the contraption above your head. To do this, hold the spool with one hand and with the other hand hold the string just above the stone. Begin whirling the spool around so both weights move as fast as possible. Gradually let go of the string below the spool.

**What happens:** The heavy weight seems to be lifted up by the lighter one.

**Why:** Of course, the button isn't doing the lifting! When you whirl the weights fast enough, centrifugal force—the force created by the whirling motion—is greater than the force of gravity. and so the stone moves up—against the pull of gravity.

---

**YOU NEED**

- string, 24 inches to 30 inches (60 cm to 75 cm) long
- spool, with or without thread
- button
- small stone