THE TWIRLED RING

When an ice skater spins with outstretched arms, then quickly lowers her arms, her rotation speed increases enormously. This effect can be neatly demonstrated with a finger ring and piece of string.

You need:
A ring
A string

What To Do
Put the ring on the string, allowing it to hang down, as shown, while you hold the ends of the string.
Twirl the ring in a circle about six inches (15cm) in diameter. While you are twirling the ring, pull on the ends of the string. The ring will speed up.

Why does it work?
When you pull on the ends of the string, the ring is forced to revolve in a much smaller orbit, causing its angular velocity to suddenly increase. The same thing happens when water goes down the drain of a sink. Give the water a circular motion with your hand. As the spiraling water diminishes in area, it spins in smaller and smaller circles and with increasing speed.