

Rotating stool and bike wheel

Key words: Angular momentum, conservation of angular momentum



Equipment List:

1. Heavy bike wheel
2. Office chair / swiveling stool

How to assemble and operate:

- Spin the wheel up as fast as possible
- Hold it horizontally
- Sit down on the chair/stool
- Flip the wheel and observe that you get some angular momentum around the axis of the stool

Description/Theory:

This demonstration shows the conservation of angular momentum, since the excess of momentum created by “reversing” the rotation of the wheel is transferred to the person on the stool.

Comments/Notes:

The heavy wheel can be dangerous, brake the wheel using an object or the floor (but make sure to use the rim, not the weights, to contact this surface, the weights *will* dig up any soft materials)