



Spinning Chairs

Activity Instructions

Mess-O-Meter



"Lightly messy"

Materials

- A spinning chair
- Weights: heavy books, filled water bottles, dumbbells
- A clear area, with carpet or a rug
- Ruler (optional)
- Stopwatch (optional)

Procedure

1. Place your spinny chair in a clear space (If your chair has wheels place it on carpet to keep it still)
2. Hold out both of your books/weight/bottles.
3. Kick off the ground to push yourself, or have an adult help push you.
4. Observe how it feels, and write it down.
5. Repeat steps 2-4 but this time start with your weights held out then mid spin hold them close to your body.
6. Observe again, and write down what you notice.

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Overview

Have you ever wondered why ice skaters pull their arms in tight to their body when they spin? When a skater moves their body like this, their mass, or the total amount of stuff, in their body, gets reshuffled around their midpoint. This impacts the speed of their spin. Physicists have spent hundreds of years studying how things move-- you can have fun experimenting with the impact of mass and momentum at home right now. This science of spin applies to ice skaters, gymnasts, and many other athletes, and also to moons, planets, stars, and other objects moving in orbits up in space!

