

Friction, Drag, and a CD Hovercraft

Think of **friction** as the grip between two surfaces. Like tires on a road, friction between the tire and the street surface keep the car on the street, and provide a push-off point to move the car forward. However, friction also produces **drag**. As more drag is produced, a moving object slows down. A hovercraft eliminates friction and drag by separating the vehicle from the road with airflow!

Building a Hovercraft

1. Spread glue around the bottom edge of the twist cap, and then press it to the CD so that the cap completely covers the CD's center hole.
2. Stretch your balloon a few times, and inflate it about half-way, twisting the neck to prevent air from escaping.
3. Carefully stretch the balloon's neck over the twist cap.
4. Place your hovercraft on a smooth surface like a table or wood floor, and release the balloon.
5. Watch what happens!

Materials

- 1 Balloon
- 1 CD
- 1 Glue Bottle Twist Cap
- Glue



What's Happening?

Your hovercraft, is producing an effect called an **Airfoil**. The balloon forces airflow under the CD. With air moving faster under the CD than over, friction with the tabletop is reduced, and the hovercraft lifts off!

