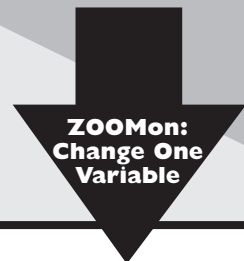
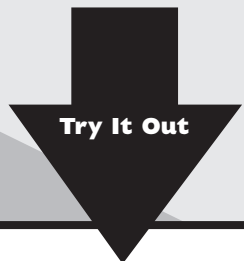




**FORCES AND ENERGY**



**Air Lift\***

Lift a book with a plastic bag and a straw.

- Number of bags
- Size of bags

- How high did you lift the book?
- How could you lift a heavier object?

- Find more air activities:
- Balancing Balls on Air
  - Card Lift

**Balloon Car**

Build a balloon-powered car.

- Size of the balloon
- Amount of air inside the balloon
- Size of the exhaust hole
- Weight of the car

- How far did the car travel? Why?
- How fast did the car go? Why?
- How can you make the car go faster or farther?

- Test out more balloon-powered vehicles:
- Balloon Car Freeload
  - ZOOM Vehicle

**Can Car**

Build a coffee can car that's powered by a rubber band.

- Size of the can
- Size of the rubber band (length and thickness)
- Number of turns with the pencil

- How far did the car travel?
- What made the car move?
- How can you make the car go faster or farther?

- Keep experimenting with potential energy and kinetic energy:
- Pet Can
  - Spool Racer

**Cotton Ball Catapult**

Make a catapult that flings cotton balls.

- Materials you use
- How you put the materials together
- Weight of the cotton ball

- How does your catapult work?
- How far did the cotton ball travel?
- How can you make it travel farther or faster?

- Investigate air resistance with:
- Glider
  - Hoop Glider

**Electric Gelatin\***

Make gelatin stick together.

- Material you rub the balloon on
- Replace gelatin with salt or unflavored gelatin

- What happened when you held the charged balloon near the gelatin?
- Why does the gelatin stick together?

- Keep experimenting with static electricity:
- Snap, Crackle, Jump

\* indicates Spanish version available

Find these activities at the **ZOOMsci** section of the ZOOM Web site:  
[pbskids.org/zoom/sci](http://pbskids.org/zoom/sci)



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