

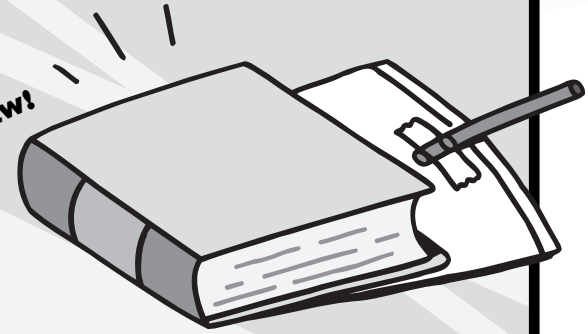


What You Need

- gallon-size, zipper-lock plastic bag
- heavy book
- pencil
- plastic drinking straw
- tape

Air Lift

Lift a book with only a plastic bag and a straw!



Science Scoop

When you blow air into the bag, the air is pushed together, or "**compressed**." The compressed air **pushes** on the bag. This makes the **bag** push on the book and **lift** it up. So the bag filled with compressed air can **support the weight** of the book. The **tires on your bike** work in the same way. They are filled with **compressed air** and can support your weight. When the air **leaks out** of bike tires, they can no longer support your weight. That is why it's hard to ride your bike when the tires are **flat**. Can you think of **other things** that use compressed air?

- 1 Close the plastic bag. **Place** a heavy book on top of it. Let about two inches of the bag **stick out** from under the book.
- 2 **Poke** a hole in the bag with the pencil.
- 3 **Stick** the straw in the hole. Use tape to **seal** the hole around the straw so no air can escape.
- 4 **Blow** into the straw. **Hold** your tongue over the straw to keep air from **leaking out** when you take a breath.
- 5 **What happens?** Can you **lift** the book off the table?



Now it's time for you to **experiment**. What happens if you use a **balloon** or **garbage bag** instead of a plastic bag? What happens if you use **more than one bag**? Can you lift a **large object**, like a suitcase? You might need to **ask some friends** to help out. Choose **one thing** to change (that's the variable), and **predict** what you think will happen. Then **test it** and **send** your results to ZOOM at pbskids.org/zoom/sci

Sent in by Ashley of Ashland City, TN



ZOOM is produced by WGBH Boston. Funding for ZOOM is provided by the National Science Foundation, the Corporation for Public Broadcasting, the Arthur Vining Davis Foundations, and public television viewers. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

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