

# Paper Tower

What's the tallest tower you can build with just 2 sheets of newspaper?

## What You Need

- 2 sheets of newspaper
- ruler

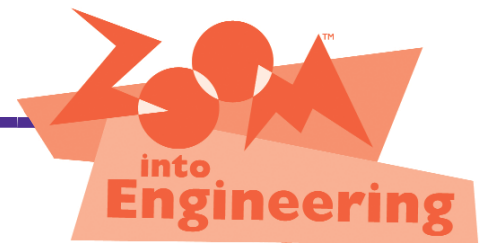


## Engineering Scoop

How can you make a **weak** material like newspaper **strong** enough to stand up? One way is to **change its shape**, like rolling it into a tube, crumpling it, or pleating it with folds. You also need to think about the different **forces** that are acting on it. The tower's **weight** is pulling the tower down. The **surface** on which the tower is resting is pushing back up. Small **air movements** are also pushing from the side and can blow the tower over. If you build a **wide base** at the bottom, this distributes the weight over a wider area and makes the tower more **stable**.



- 1 **Build** the tallest tower you can. You can bend, tear, crumple, or roll the newspaper.
- 2 Try to make the tower **taller**. Keep **redesigning** it until you can't go any higher.
- 3 Use the ruler to **measure the height** of your tower. It must stand for at least **30 seconds** without falling over.



How can you make your tower even **taller**? What happens if you add 20 cm (about 8 in.) of **tape**? What happens if you use **books** as a foundation to support the bottom of the structure? Or, what happens if you use a different type of **paper**, like tissue paper, copier paper, or cardboard? Choose one thing to change (that's the **variable**) and make a **prediction**. Then **test it** and **send** your results to ZOOM.

Sent in by Jen W. of Maple Springs, NY