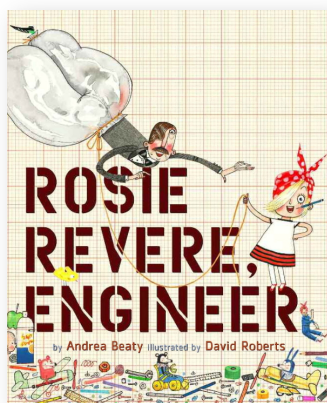


**ROSIE-COPTOR**



# ROSIE-COPTOR

*Can you help Rosie Revere engineer a set of copter blades so she won't crash land?*

**YOUR CHALLENGE:** Change the blades on Rosie Revere's copter to make it fall to the ground as slowly as possible.

## WHAT TO DO

**1) OBSERVE** Rosie's original copter in action. First, though, you will have to make it!

- Cut out a Rosie-Coptor template.
- Cut along the dotted line to make the copter blades.
- Fold on bottom double line to make the cockpit.
- Secure the fold with a paperclip (straight up and down and centered).
- Fold one blade forward and one blade back perpendicular to the cockpit.
- Holding the copter at the clip, reach your hand as high as you can and drop it. Observe how fast it falls.

**2) BRAINSTORM** some changes to the copter blades that you think might make it fall slower. How long or short? What shape? Folds? Holes? What else?

**TIP** Engineers often use familiar things as inspiration. Do you get any ideas if you think of things that fall and glide—like balls, leaves, parachutes, flat paper, birds, crumpled paper, etc.?

**3) CONSTRUCT** a copter according to your own plan with the Your-Coptor template.

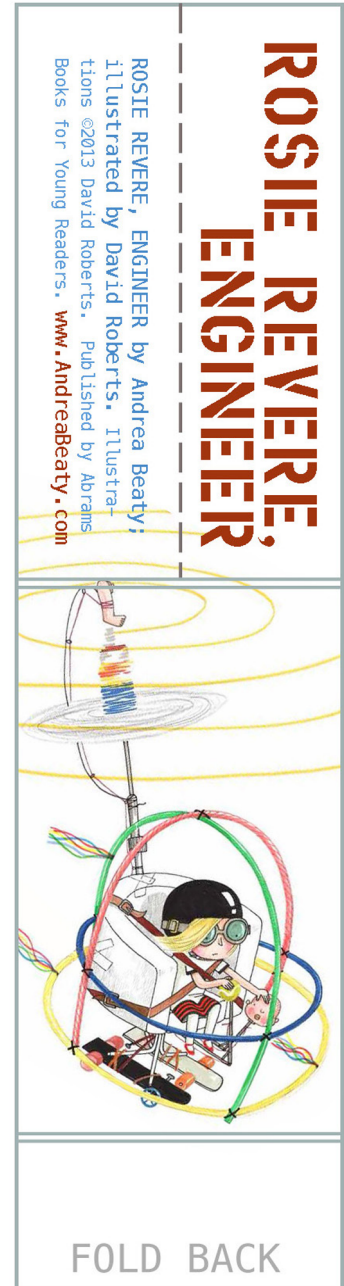
**4) TEST** Your-Coptor design by comparing it the Rosie-Coptor. Hold each copter at the clip, one copter in each hand. Reach both arms as high as you can. Drop the copters at the same time. Repeat a few times to be sure of your results. Does Your-Coptor fall slower than the Rosie-Coptor?

**5) REDESIGN.** Whether your design passed or failed the performance test, it can probably be improved. Give it a try!

**CHEESY IDEA** Once, Rosie made a heli-o-cheese copter that used cheese squirted in a circle instead of copter blades!

Do you have a cheesy idea? Give it a try and see if it helps or hurts your copter performance!

**6) SHARE** your engineering ideas on the **Rosie Revere, Engineer** Facebook page if you like! (Facebook.com/RosieRevereEngineer)



**YOUR-COPTOR**

