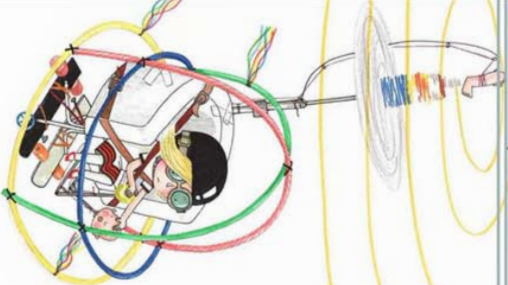


ROSIE REVERE, ENGINEER *Template*

**ROSIE REVERE,
ENGINEER**

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**ROSIE REVERE,
ENGINEER**

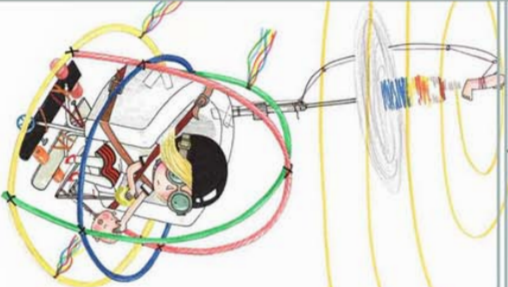
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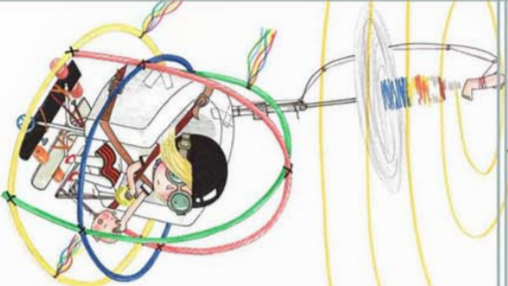
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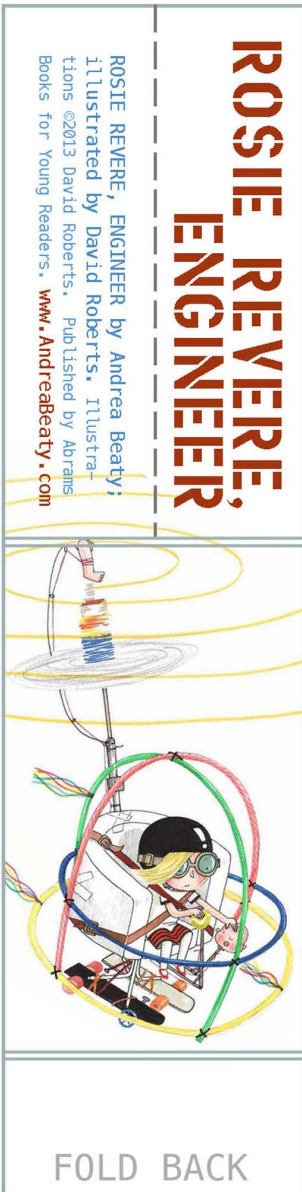
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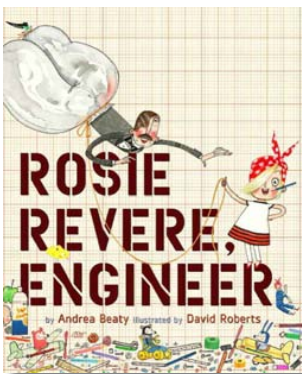


FOLD BACK



FOLD BACK

ROSIE-COPTER



ROSIE-COPTER

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-Copter 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, or crumpled paper?

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

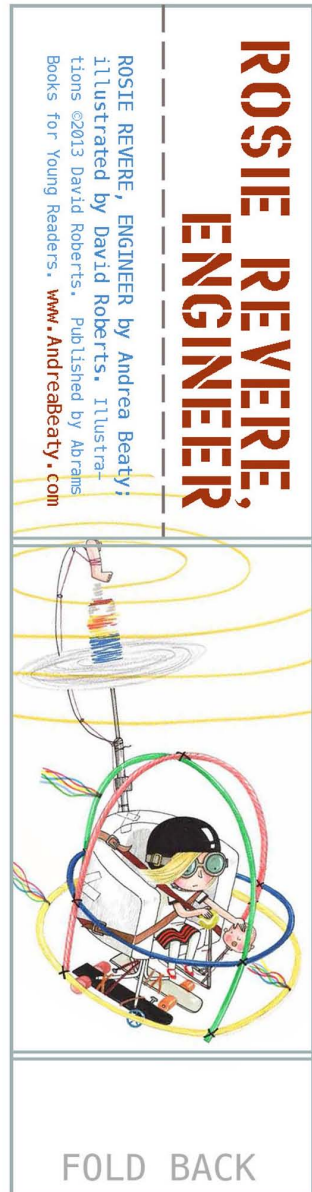
4) TEST Your-Copter design by comparing it the Rosie-Copter. Hold each copter at the clip, one copter in each hand. Reach both arms as high as you can. Drop the copters at the same time. Repeat a few times to be sure of your results. Does Your-Copter fall slower than the Rosie-Copter?

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)



FOLD BACK

YOUR-COPTER



THIS ACTIVITY is based on the picture book ROSIE REVERE, ENGINEER by Andrea Beaty and illustrated by David Roberts (Abrams Books for Young Readers). ISBN: 978-1419708459. More at www.AndreaBeaty.com.