

# Build a Rotocopter

Helicopters fly by generating lift. Lift is an upward pushing force that occurs when the blades of a helicopter rotate and a difference in air pressure is created on either side of the blades. Under the blades the air pressure is higher and above the blades the air pressure is lower. This allows the helicopters to ascend into the air. A rotocopter also demonstrates differences in air pressure.

## Steps:

First, print the attached template, or use a pencil to copy the image onto a piece of paper.

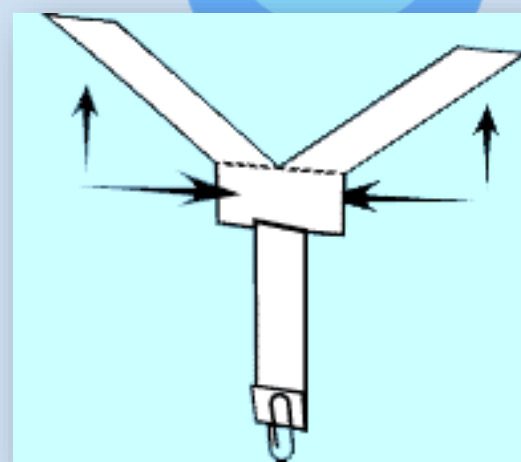
1. As pictured on the template, cut along all of the solid lines.
2. At the dotted line, fold tabs A away from each other.
3. At the dotted lines, fold both B tabs towards each other.
4. At the dotted line, fold tab C up towards the B tabs.
5. Secure tab C in place with a paper clip. You're finished!

## Test It:

- Hold the rotocopter by the B tabs, before letting it fall.
- Weight affects how quickly the rotocopter spins, try adding additional paper clips.
- Make the rotocopters with different paper types. Does an index card work better or worse than printer paper?

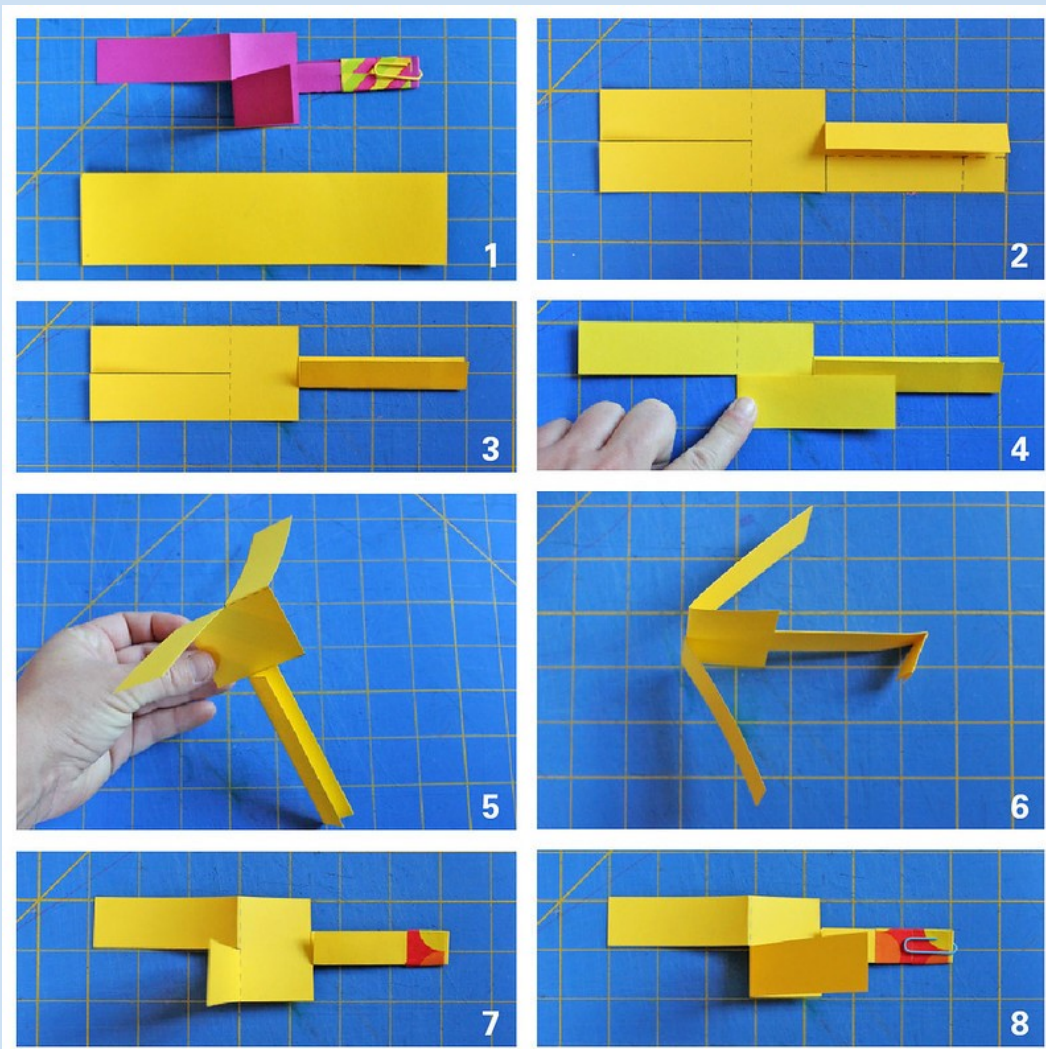
## Materials

Paper  
Pencil  
Scissors  
Paperclip



## Opposing Forces

The force of air upward on the blades as they fall is what causes the paper rotocopter to spin. As the rotocopter falls, air presses on each of the blades with an equal force, but in opposite direction. The two forces opposing each other result in a spin!



# Build a Rotocopter

Print the template to build three rotocopters. Be careful to only cut on the solid lines, and then fold on the dotted lines. Don't forget to add a paperclip to hold folds B and C together!

