

# Paper Whirlybird

## Sections



Joey Scouts



Cub Scouts



Scouts



Venturer Scouts



Rover Scouts



**Scouts**  
VICTORIA

## Challenge Areas



COMMUNITY



PERSONAL GROWTH



OUTDOOR



CREATIVE

## Scout Method Elements



COMMUNITY INVOLVEMENT



LEARNING BY DOING



NATURE AND THE OUTDOORS



PATROL SYSTEM



PERSONAL PROGRESSION



PROMISE AND LAW



SYMBOLIC FRAMEWORK



YOUTH LEADING, ADULTS SUPPORTING

## SPICES Growth Areas



SOCIAL



PHYSICAL



INTELLECTUAL



CHARACTER



EMOTIONAL



SPIRITUAL

# The Adventure

Find out how helicopters fly by making your own paper whirlybird!

## Plan

1. Investigate how helicopters fly, and why they have spinning blades. Look into how gravity and lift factor into flight.

Scientific American have a good article about whirlybirds, upon which this Challenge Card was based:

<https://www.scientificamerican.com/article/make-a-whirlybird-from-paper>

## Do

1. Print out the whirlybird template, or use a ruler to draw your own based on the dimensions.
  - a. <https://www.sciencebuddies.org/science-fair-projects/whirly-bird-template.pdf>
2. Cut along the solid lines.
3. Fold along the dashed lines.
4. Place a paperclip on the folded section at the bottom as a weight.
5. Now it's time to take flight! Drop your whirlybird from as high as you safely can.

## Review

1. How long did it take for your whirlybird to reach the ground?
2. Did it start spinning straight away, or did it freefall before it started spinning? Why do you think this is?

## Safety

- Be careful using when using scissors to cut out your whirlybird.
- When folding the paper and using your whirlybird, be careful of papercuts.
- The higher the whirlybird can be dropped from, the better flight it will have. Younger members may need to stand on a step, or similar. Be careful if doing this and ensure that youth members are supervised at all times.

## Variations

- In the name of science, repeat your drop multiple times. You might wish to time how long it takes for it to drop each time.
- Do different types of paper make any difference to the time it takes for your whirlybird to reach the ground?
- What if you don't use a paperclip? What if you weigh your whirlybird down with multiple paperclips?
- What if you made your whirlybird bigger, using an A3 sheet of paper instead of an A4 sheet? Do you think anything would change?