Paper Whirlybird

Sections

Joey Scouts
Cub Scouts
Scouts
Venturer Scouts
Rover Scouts

Scouts VICTORIA

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Challenge Areas

COMMUNITY
CREATIVE
OUTDOOR
PERSONAL GROWTH

Scout Method Elements

COMMUNITY INVOLVEMENT
LEARNING BY DOING
NATURE AND THE OUTDOORS
PROMISE AND LAW
PERSONAL PROGRESSION
PATROL SYSTEM
SYMBOLIC FRAMEWORK
YOUTH LEADING, ADULTS SUPPORTING

SPICES Growth Areas

CHARACTER
EMOTIONAL
INTELLECTUAL
PHYSICAL
SOCIAL
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.

Do

1. Print out the whirlybird template, or use a ruler to draw your own based on the dimensions.
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?