

A STEM in the Park Take Home Activity

STEM in the PARK

Science, Technology, Engineering, and Mathematics

Fantastic Flyers

What You Need

- Flarble™ Copter
- Fingers



Caution: Because this toy is small and could present a choking hazard, please take care to use adult supervision with children under 4 years of age.

What To Do

1. Hold the copter in your right hand with the propeller up and the shaft down. Place the copter between your middle or index finger and your thumb.
2. With a quick snapping motion – like snapping your fingers – spin the copter counterclockwise.
3. It should fly vertically ten feet or more.

Hint: If you are left-handed you can fly it the same way with one trick — hold the Flarble® upside down and snap!

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Observe...

How far does your copter fly? Does how you snap your copter make a difference in how long it stays in the air. Use a timer to measure how long it takes from the time you snap your copter until it lands.

Learn...

Gravity pulls the helicopter down. The rotors of the copter are an airfoil. They catch the slower-moving air below them, which provides lift and drag for the helicopter. When air pushes upward on the slanted rotor blades, some of that thrust becomes a sideways, or horizontal, push. The rotors cause the helicopter to turn because the air pushes on each rotor separately. Those two opposing thrusts or pushes work together to cause the toy to spin.

Investigate...

Use your inquiry skills to figure what it would take to land your copter in a specific area. Try using a small wastebasket on the floor as your target.

Try standing different distances away (5 feet, 10 feet – you decide) and practice snapping your copter up to see if you can get the copter to land in the wastebasket. Once you get very good at judging the distance you can fly your copter, trying landing it in a coffee mug.

This activity is brought to you by NWO

