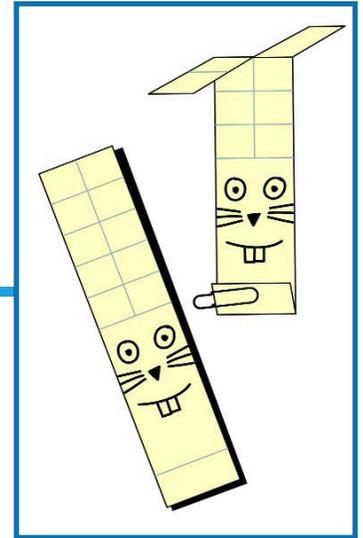# Build a Better Bunny Copter

How fast can you make a paper helicopter twirl?

Instructions

Students experiment with gravity and the effect of weight on velocity as they try to make a paper helicopter twirl on its way to the ground. Give each pair of students a printed copy of the template that shows how to cut out the bunny copter strips.

1 Cut out 2–3 bunny strips from the paper template.

2 Color the bunny strips.

3 Per bunny strip: count down 2 boxes. Cut along the dotted line to the solid line at the bottom to make "ears." Fold one ear forward on the solid line and one ear back.

4 Fold up the bottom of the copter on the solid line and attach a paper clip.

5 Hold the copter up high and let it drop, noting how fast it twirls before it hits the floor.

6 Design a new bunny copter that will twirl faster.

Materials

PER STUDENT:

☐ 2–3 Bunny Copter paper strips (see template)

☐ 2–3 paper clips

☐ Crayons

☐ Scissors

☐ Ruler

☐ Pencil

Find more activities at:
www.DiscoverE.org

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Engineering & Science Connections

🔗 Designing a real helicopter is more complex than this experiment, but the process is similar. Through experimentation and calculation, a design is made and then tested and revised where necessary. This process is often repeated a number of times.

🔗 This activity involves determining a method to resist, or work against, the forces of gravity. In nature, you can see this method with maple seeds: they use wings to catch the wind and twirl away from the parent tree before falling to the earth.

🔗 This activity shows how the bunny ears, acting as a rotor, create resistance to the downward force on the bunny. Similarly, a boat propeller uses resistance to create a force in the water that moves the boat.
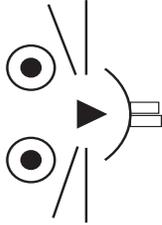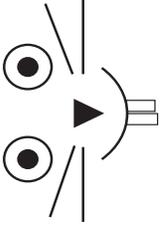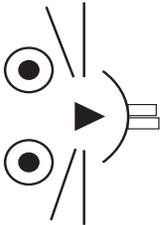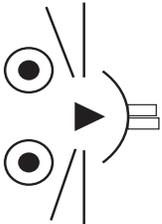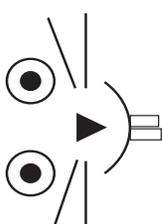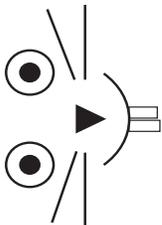
Guiding Questions ?

What would happen if you didn't attach a paper clip? What would happen if you attached more than one paper clip?

What would happen if the bunny copter were made out of cardboard or balsa wood instead of paper?

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Bunny Copter Template

		TEAR OR CUT HERE				FOLD HERE
		TEAR OR CUT HERE				FOLD HERE
		TEAR OR CUT HERE				FOLD HERE
		TEAR OR CUT HERE				FOLD HERE
		TEAR OR CUT HERE				FOLD HERE
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