

DIY TOY PARACHUTE

This hands-on activity helps students understand gravity, air resistance, and terminal velocity.

Objective:

By exploring variables such as material, shape, and weight, students can deepen their understanding of gravity, air resistance, and terminal velocity.

Procedure:

1. Cut a square or circle from your lightweight material. The size of the canopy can vary, but a square around 5" by 5" or a circle with a 5" diameter works well for a basic parachute.
2. Cut four pieces of string, each about 10" long. Punch four holes, equidistant, around your parachute material and tie each string securely.
3. Choose a small object to act as the weight for your parachute. This could be a small toy, a washer, or a bit of clay shaped into a ball.
4. Gather the free ends of the strings together and tie them to your weight. Ensure the strings are of equal length so that the weight hangs evenly beneath the canopy.
5. Find a safe location to test your parachute, such as a balcony, stairwell, or playground structure. Hold the parachute by the canopy and drop it from a height, timing how long it takes to reach the ground using a stopwatch. Repeat the drop several times to ensure consistency in your results. Record each drop time in your notebook.

Materials:

Lightweight fabric or plastic (plastic bag, fabric, or a large coffee filter)

String or thread

Small object (e.g., washers, small toy figures, or clay)

Hole puncher

Ruler or measuring tape

Stopwatch

Notebook and pen for recording results

Material Comparison: Try making parachutes with different materials (e.g., fabric, plastic, paper) to see which creates the most air resistance.

Shape and Size: Experiment with different shapes (e.g., triangles, hexagons) and sizes of the canopy to observe how they affect the descent rate.

Weight Variations: Use different weights to see how the mass of the object affects the parachute's performance.

Design Challenge: Have students design their own parachutes with specific goals, such as the longest hang time or the most stable descent.

MY SCIENCE EXPERIMENT

DIY Toy Parachute



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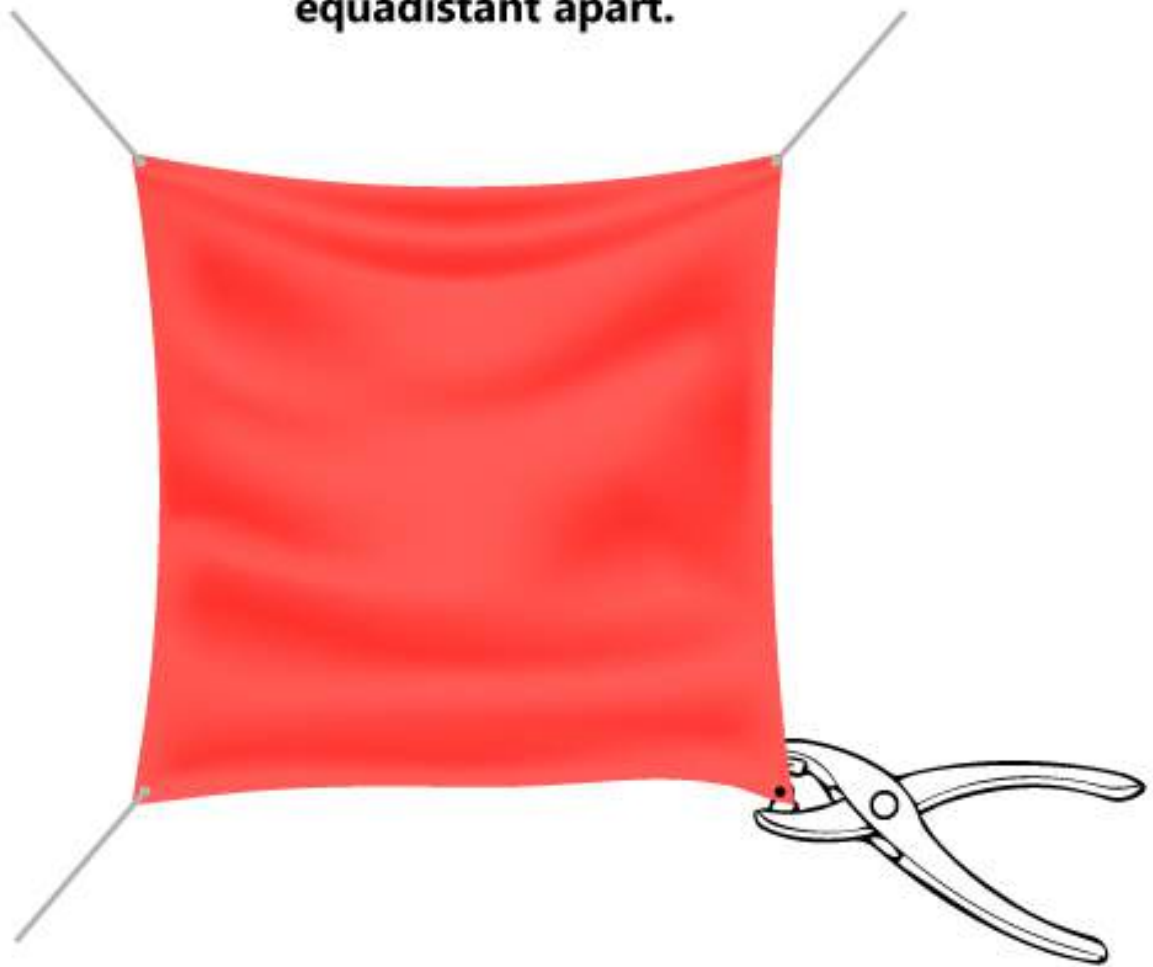
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DIY Toy Parachute

Use hole punch to make four holes in your material, all equidistant apart.



Tie 4 equal sized strings to each of the holes.

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DIY Toy Parachute

Gather the free ends of the strings together and tie them to your object.



Ensure the strings are of equal length so that the weight hangs evenly beneath the canopy.

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DIY Toy Parachute

Find a safe location to test your parachute, such as a balcony, stairwell, or playground structure.



Hold the parachute by the canopy and drop it from a height, timing how long it takes to reach the ground using a stopwatch.



MY SCIENCE EXPERIMENT

DIY Toy Parachute

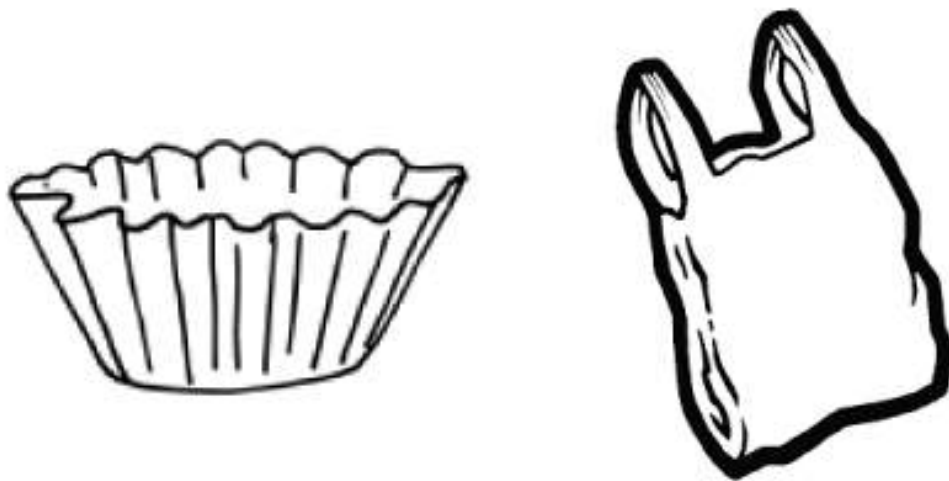
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Experiment with different shapes (e.g., triangles, hexagons) and sizes of the canopy to observe how they affect the descent rate



