



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences –particularly students of color and girls – by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at www.projectexploration.org/stemathome.

In this activity, you will:

design and test a parachute.



Supplies Required:

- A plastic bag or light material
- Scissors
- String
- A small object to act as the weight, a little action figure would be perfect

Video

How to make a parachute from plastic bag: <https://tinyurl.com/udr85te>

Overview

Learn about air resistance while making an awesome parachute! Design one that can fall slowly to the ground before putting it to the test, making modifications as you go. Hopefully your parachute will descend slowly to the ground, giving your weight a comfortable landing. When you release the parachute, the weight pulls down on the strings and opens up a large surface area of material that uses air resistance to slow it down. The larger the surface area, the more air resistance, and the slower the parachute will drop.

Cutting a small hole in the middle of the parachute will allow air to slowly pass through it rather than spilling out over one side, this should help the parachute fall straighter.



Instructions



1. Cut out a large square from your plastic bag or material.
2. Trim the edges so it looks like an octagon (an eight sided shape).
3. Cut a small hole near the edge of each side.
4. Attach 8 pieces of string of the same length to each of the holes.
5. Tie the pieces of string to the object you are using as a weight.
6. Use a chair or find a high spot to drop your parachute and test how well it worked, remember that you want it to drop as slow as possible.

Additional Resources

Think About It! Do bigger parachutes work better? How would you modify the design to carry a heavier or lighter weight?

1. How does a parachute work? <https://tinyurl.com/we6r5nj>
2. Parachutes and the science of air resistance: <https://tinyurl.com/yakmqzkn>

Share It Out

Share on social media: take a video of your parachute and explain the science behind it to your friends and family. Share your explanation on social media using the hashtags:

#ParachuteChallenge
#ProjectExploration
#StemAtHome

Tag a friend and challenge them to design and test their own parachute!

Share via PE's website: Students who complete STEM@home activities and share what they learned with the PE team via our website will earn points which can be traded in for cash prizes at the Explore Store. Your project number is 414. Learn more at www.projectexploration.org/explore-store

Join PE's character contest!

Design a STEM character who will lead kids through activities and be featured on our website and in our STEMbooks. Cash prizes will be awarded to the top 3 finalists. Learn more at: www.projectexploration.org/character-contest.



Call or text us for help: 312-772-6634



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