

BOOMBOX



TIME

BOOMbox at Home

Speed Races with Parachutes

The science of parachutes is a great way to learn about physics, air resistance, and gravity. Parachutes are devices used to slow down a person or object falling from a high place. They work by creating air resistance, which pushes against the parachute and slows down the descent of the object or person. In this BOOMbox at home activity, we are going to make a paper parachute and see how quickly—or slowly—it floats to the ground. The weight of what's in the basket will have an impact. Design your own parachute using coffee filters, yarn, and paper cups.

Supplies

- Paper cup
- Yarn or string
- Tissue paper or plastic bag
- Hole punch
- Scissors
- Ruler
- Tape
- Markers to decorate

Instructions

- Cut a 12-inch x 12-inch square out of your tissue paper or a plastic bag.
- Reinforce each corner with a piece of tape.
- Punch a hole in each piece of tape.
- Cut 4 pieces of yarn or string, each 12 inches long, and attach one to each hole in the corners.

- Grab a paper cup.
- Find a test location from a tall height (a safe open space not near any breakables).
- Drop your cup from the test location without the parachute and time how long it takes to reach the ground.
- Take a paper cup and punch 4 holes evenly spaced around the top of the cup.
- Tie one string to each of the holes on the cup.
- Fold the parachute so the four corners lie on top of each other. Check that the lines are not tangled.
- Pick up your parachute from the opposite corner of the strings. The cup should be hanging under the parachute.
- Bring your parachute to the test location to test a few times, drop your parachute with the cup several times from the same location. Time the drops to see the difference from dropping the cup alone.
- Add different materials and weights to the cup of your parachute to test which material goes fastest or slowest.
- Test different materials and even different size parachutes. Time your drops and compare.

Want to explore more?

- Science Buddies has a great video about making a parachute: [Make a Parachute.](#)
- Interested in learning more about parachutes? Check out SciShow for Kids on YouTube with the episode titled [Playtime with Parachutes: Physics for Kids.](#)

What will you learn today?