

Air & Aerodynamics: Parachute Fun

A simple toy parachute can lead to discussions and trials of many air resistance experiments.

Materials:

- Plastic grocery bag
- Dinner plate
- Yarn or string
- Tape
- Scissors
- Hole punch
- Markers
- Object or toy (light weight)

Procedure: (Remember to have your parent's permission and have them watch and help you.)

- Using the plate, trace a large circle on one side of the plastic bag and cut it out.
- Mark four spots around the circle with a marker, equal distance apart.
- Cover each spot with a piece of tape to make the area less resistant to tearing.
- Punch a hole out of each spot.
- Take 4 pieces of 30 cm of yarn and attach one to each of the holes.
- Tie their loose ends together along with a length of 10 cm yarn.
- Use the 10 cm piece to attach the passenger (light weight object). You want the parachute to drop slowly to the ground so you may want to try a number of different objects before you find the right combination.
- Use your markers to decorate your parachute.
- Find a place to drop your parachute that will give you some height.
- Drop a "parachuter" of similar object without the parachute off the same place and see what happens. Why did the parachute make the object drop slower?



What's Happening:

Air Resistance occurs when a moving object is pushing against the air, which slows the moving object down. Air resistance helps airplanes fly, windmills move, and parachutes to fall gently to the ground. Air resistance can also be dangerous at high speeds, such as in hurricanes or tornados.

Anything that moves through the air is met with resistance. A good way to "see" air resistance is with a helium balloon. If you were to hold the balloon on a string, it floats vertically. Once you begin to move with the balloon, it starts to get pulled down and drags behind you. That is because the air resistance is dragging it down.

When you release the parachute, the object (parachuter) pulls down on the strings and opens a large surface area of material that uses air resistance to slow it down.

Extension:

The larger the parachute, the more air resistance, the slower it will fall. Try different sized parachutes and weights to see how quickly or slowly they will fall.

This activity is based on our Classroom Chemistry kit. The source for this lab is <http://kidsactivitiesblog.com/18461/make-a-parachute-kids-parachute-resistance-experiments>. Our teaching kits (described on our website) are loaned out FREE to provide classroom teachers and parents of home schooled children an opportunity to explore Science in interesting ways. Please consider volunteering as a classroom guest speaker or offer your business as a field trip location.

Lorne Cooper, Regional Executive Director

PRAXIS, "Making Science Fun". Contact Praxis at praxis@praxismh.ca, www.praxismh.ca, Tweet or follow us

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