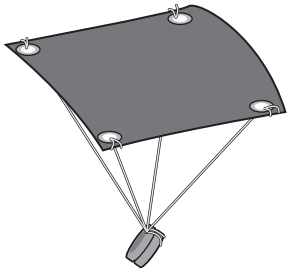
Activity: Parachutes

Problem: How should you shape a 25 cm square to make a parachute that provides the slowest fall?

Hypothesis/Prediction:

Materials:
- a large plastic garbage bag
- thread
- reinforcements
- four or five weights such as washers, all the same size and weight

Diagram:



Procedure:

1. Start by cutting a 25 cm square out of the plastic garbage bag.
2. Make a small hole in each corner and stick a reinforcement over each hole to strengthen it.
3. Cut four pieces of thread, all the same length and tie to each hole.
4. Attach the loose ends of the four strings each to the weight.
5. Cut a circle similar in size to your square. Mark six holes, evenly spaced around the circumference. Make six holes and reinforce them. Follow steps 3. and 4.
6. Design two more shapes similar in size to your square and circle, and follow the steps above to make more parachutes.
7. Test each parachute by dropping all from the same height. Have someone help record the exact time it takes for the paracute to land.
8. Test each parachute three times.

Activity: Parachutes (continued)

Observations:

Type of Parachute	Square Parachute	Round Parachute	_____ Parachute	_____ Parachute
Test #1				
Test #2				
Test #3				

Inference/Conclusions:

Did you know?

When skydivers jump out of an airplane, they will fall at 65 metres per second. Skydivers don't have much surface area to make friction with the air. When they open their parachutes, the big increase in surface area creates more friction and slows them to five metres per second, a safe landing speed.