





Perfecting a Parachute

A parachute is designed to help an object return safely to the ground from a height.

When a parachute opens, the air resistance increases to slow the object down. The object will continue to slow down until a lower terminal velocity is reached (the air resistance force will equal the weight). From here, the object will continue to fall at a steady speed until it lands.

You will need:

- Plastic or paper cup
- Plastic bag
-  String
-  Scissors



Parental Supervision is Required



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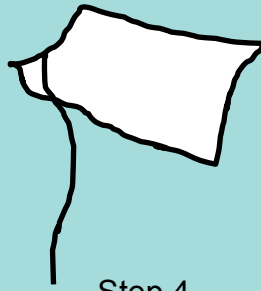
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Step 1



Step 4



Step 7

How to Create your Parachute:



Parental Supervision is Required

1. Punch four holes in a cup, just under the rim. These should be evenly spaced around the circumference of the cup.
2. Cut a 14x14 inch square out of a plastic bag—this will be your parachute.
3. Cut four lengths of string to 14-inches each.
4. Gather a corner of your plastic square and tie one length of string around it. Remember to leave some extra string to attach this corner to the cup.
5. Repeat Step 4 for the remaining three corners of your plastic square.
6. Tie the end of one piece of string to one hole in the cup.
7. Repeat Step 6 for the remaining three pieces of string.
8. Test how quickly your parachute takes to fall from different heights!

Does changing the parachute material impact the time taken to fall to the ground?



Tissue



Fabric

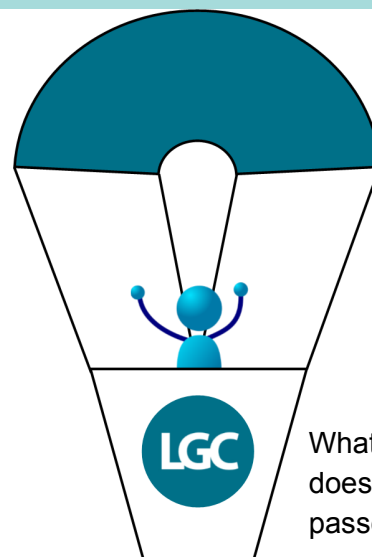
Netting

Does changing the size square used for the parachute change the fall time?

8 / 12 / 16 inches



For inquisitive minds...



What effect, if any, does adding a passenger have?