



For children under adult supervision

Materials you'll need

Disposable plastic/paper cup

Plastic sack

String

Paper punch or kitchen utensil

Scissors

Tape Measure



Steps

1. Choose a landing site on the ground.

Punch 4 holes in the top of a plastic/paper cup, just under the rim. Try to make the holes equal distance apart. Make sure to fill your cup with stuffing to keep your egg safe!

2. Colour in your paper or plastic cup to look like a rocket! We need to bring rockets safely back down to earth using a parachute! Why not give your cup rocket a few fins too? Send us a picture we would love to see!

3. Cut one plastic kitchen garbage bag into a 36 x 36 centimetre (or larger) square.

4. Now cut four 36 centimetre (or longer) lengths of string for the parachute.

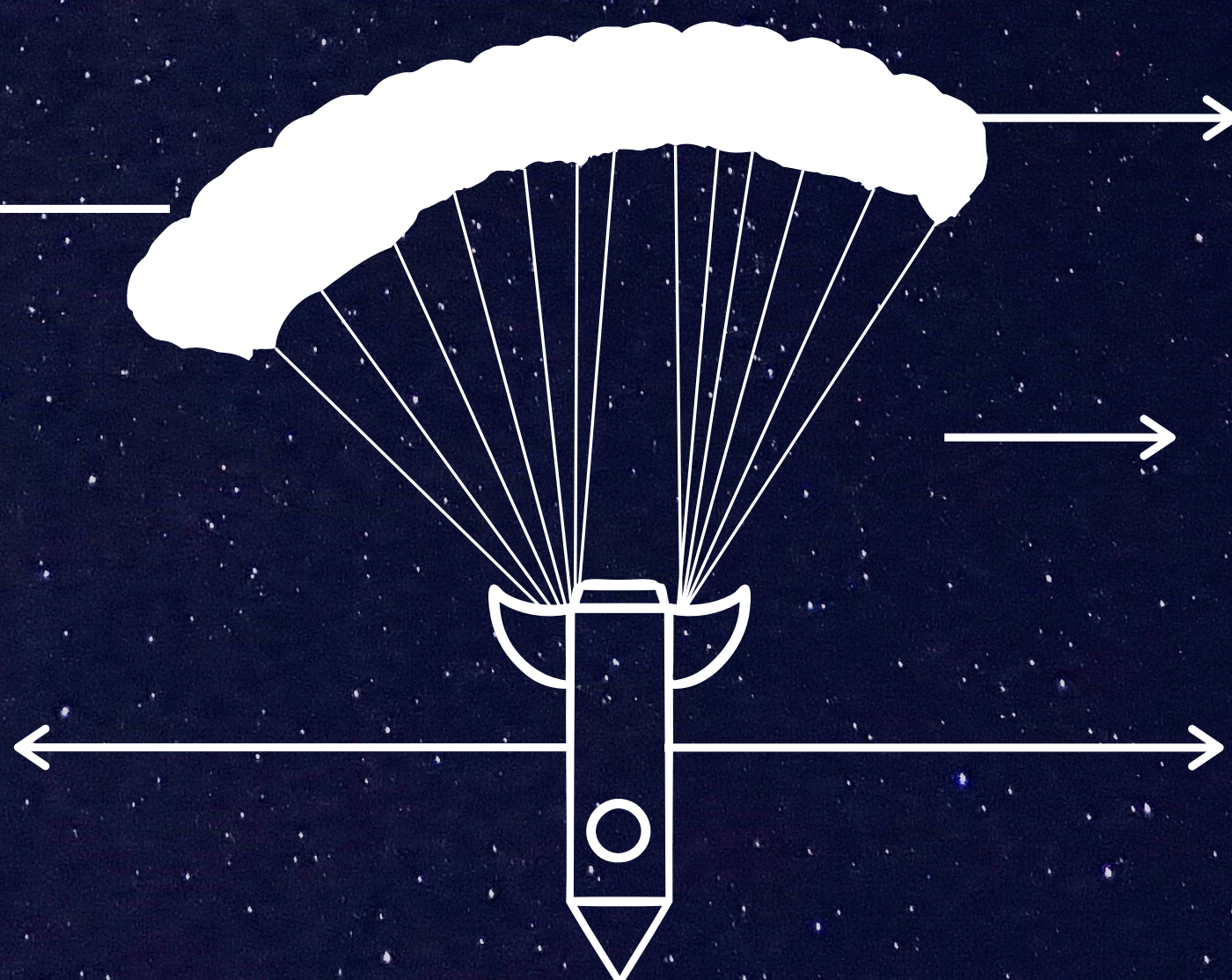
5. Take the pieces of string and tie them around each corner of the plastic bag leaving only a small tail.

6. Then tie each string to a different hole on the cup. TIP: Try to keep the tails all the same length so you don't get a uneven parachute.

7. Finally put your egg in the cup! Now all that is left to do is to go to a high place and drop the parachutes trying to hit your intended landing site.

The parachute bringing the rocket safely down from orbit.

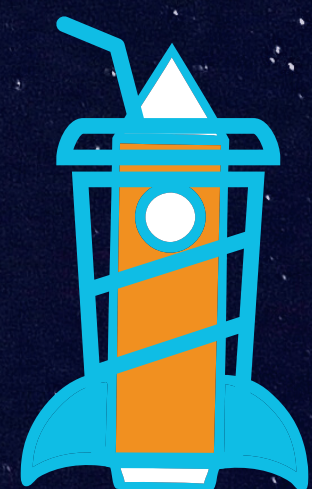
The rocket payload



The plastic bag from which you cut your parachute square



The strings you cut.



Your plastic or paper cup



The science behind Skyrora's parachute activity

This parachute experiment provides an examination of how a parachute recovery system allows for the safe landing of Skyrora's test rockets.

When the parachute is released, the weight pulls down on the strings and opens 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.

When we launch our small rockets, the motor runs for a short period of time. Pushing it up to maximum speed it then coasts upwards to maximum height and slows down to a near halt. Sensors in the rocket detect when it has reached this point and activate a small pyrotechnic charge to push out the parachute. This makes for a slow descent and a safe landing.

A parachute recovery system enables certain parts of the rocket to land safely and therefore ensures reusability of important equipment. Skyrora's small rockets allow us to test various avionics and onboard systems in preparation for use on our full-size vehicles.