

Balloon rockets

Your task

Use the equipment given to make a balloon rocket.

Your rocket should travel as **far as possible** along the string guideline.

Job 1

Make a balloon rocket.

You can use any of the following equipment:

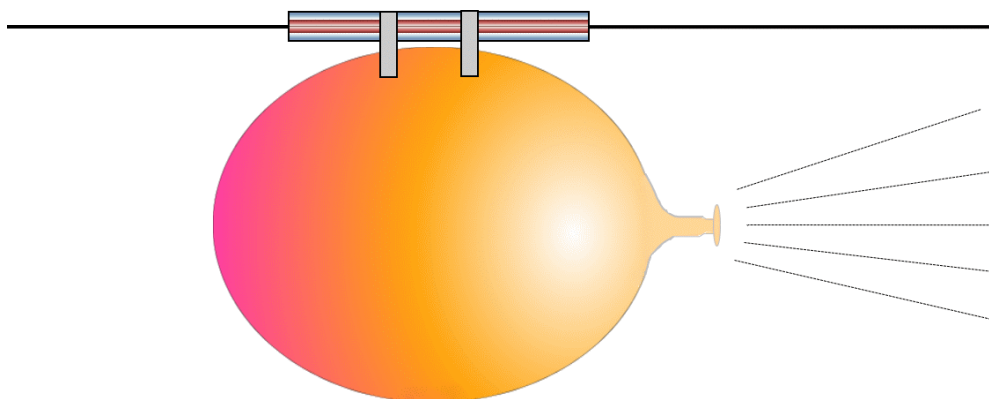
- 4 × party balloons
- 4 × drinking straws
- 4 × paper clips
- scissors
- sticky tape



Think about how you can control the release of air from the inflated balloon.

Job 2

Test your balloon rocket on your rocket testing facility. Remember that your rocket should travel as far as possible along the string guideline.



You may now use the other bits provided, in any way you want, in an attempt to make the rocket go further.



Make sure any bits you add to your balloon rocket do not add too much to its mass or air resistance.

Judging

Your balloon rocket will be judged to see how far it goes.

Remember:

- ✓ the winner is the rocket that travels furthest (however quickly or slowly it does this).

Balloon rockets

Teacher Guide

Contents

- Activity notes
- Student checklist
- Technician notes

Activity notes

This activity is easy and fun. The main problem is how to stop the air coming out of the balloon too fast. This is where the drinking straws and paper clips help.

Nearly all groups will burst some balloons in the building and testing stages, so have some extras handy. It helps to make it a timed exercise (how long depends on how they are getting along with the problem). The string for the 'rocket testing facility' must be stretched tight, and free of knots.

Beware the howls of protest when the students remember that it doesn't matter how **fast** their balloon rocket goes, only how **far**!

Balloon rockets

Technician notes

Per group of students:

- 4 × party balloons
- 4 × clean drinking straws
- 4 × paper clips
- 1 × roll of sticky tape
- 1 × pair of scissors
- 2 × A4-sized sheets of card
- 4 m length of string

In the lab:

- spare balloons
- spare string

Balloon rockets

Student checklist

Check that you have the following things.

- 4 × party balloons
- 4 × clean drinking straws
- 4 × paper clips
- 1 × roll of sticky tape
- 1 × pair of scissors
- 2 × A4-sized sheets of card
- 4 m length of string

You may be given more balloons to replace the ones you started with.

However, your rocket may **not** consist of more than four balloons.

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Student checklist

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