

## Balloon Rocket Experiment

On SCOPE's Rockets episode, Tasmin experimented with different types of rocket balloons. Here's how to try this experiment at home!



### What you need:

Balloons (different shapes)  
 A few metres of string and fishing line  
 Drinking straws cut into small sections  
 Sticky tape  
 Bulldog clip

### What to do:

1. Tie one end of the string to a high point, and roll the other end out to the ground.
2. Thread the string through a piece of straw.
3. Your balloon rocket will be fuelled by air, so blow up one of the balloons but don't tie it – clamp it closed with the bulldog clip instead.
4. Sticky tape the balloon to the straw, with the balloon opening pointed towards the ground.
5. When you're ready for blast off, take the bulldog clip off the balloon and watch it fly!
6. Record how far the balloon flies up the piece of string.
7. Try the experiment again with different shaped balloons, and with fishing line instead of string. Does this change how far the balloon rocket travels? If you blow more air into the balloon does it travel further or faster, or both?

### What's happening:

When you blow up the balloon, you're creating lots of pressure inside the balloon. Once you release the balloon the air rushes out, propelling the balloon up along the string.

Narrow balloons have less air resistance than round ones, which means they can travel faster. String is much rougher than fishing line, and so the balloon travels more slowly on the string. It's the same as trying to slide down a smooth plastic slide or a rough wooden one – you slide much faster down a smooth one!