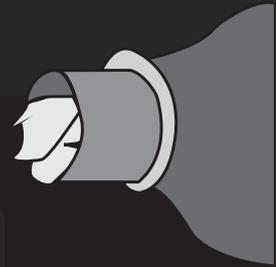


# SCIENCE SHOW OFFS

## WIND IN A BOTTLE

### RESOURCES NEEDED

- **Any clean, empty bottle**  
Make sure you use a bottle that has not contained anything poisonous.
- **Ball of paper**  
Look in your paper recycling!



### EXPERIMENT

#### SET-UP

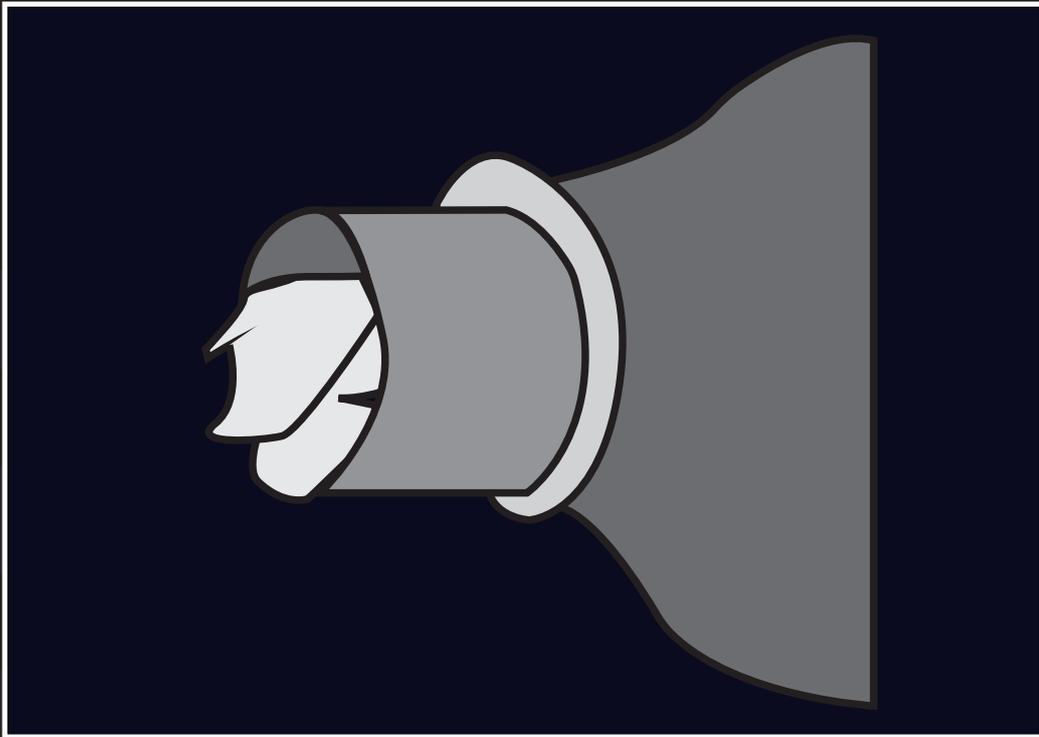
- Set up an empty bottle with a small paper ball sitting loosely in the mouth of the bottle. Get a group of friends together for this challenge!

## STEP 1

- Place the paper ball loosely in the mouth of the bottle.

## STEP 2

- Challenge people to blow the ball into the bottle.  
It will always fall out!



## DISPOSAL AND CLEAN UP

- All materials from this Science Show Off can be reused, so keep them in a box for later!

## RISK MANAGEMENT

### RISK

Blowing the paper ball on someone's face.

Spread of saliva when blowing.

### MANAGING THE RISK

Make sure no one is close to the bottle.

## SCIENCE EXPLAINED

The bottle is already full of air, so trying to blow more air into the bottle is impossible. The air we blow rushes to the sides of the bottle. The particles in the fast moving air are more spread out, so this creates a low pressure area that pulls the ball out of the mouth of the bottle. This physical reaction to the air current is called the Bernoulli Principle.

## REAL WORLD EXAMPLES

This science is used in pumps and ejectors to move fluids from one place to another.

## PARENTAL GUIDANCE

Science Show Offs should take place with appropriate adult supervision.

## COMPETITION

To enter the Science Show Offs Competition, go to;  
[otagomuseum.nz/scienceshowoffs](http://otagomuseum.nz/scienceshowoffs)