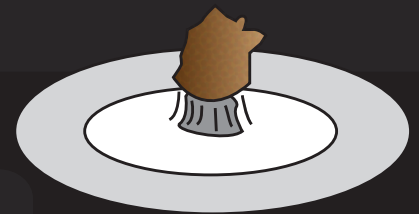


# SCIENCE SHOW OFFS

## FLYING TEA BAG

### RESOURCES NEEDED

- **Teabag**  
You need one with a staple, or a thread, not one that is joined with glue.
- **Barbeque lighter or matches**  
Long barbeque lighters work best.
- **Plate**  
A dinner plate works well.



### EXPERIMENT

#### SET-UP

- Clear a table, and place the plate in the centre. Make sure there is nothing flammable nearby as the teabag might fly off the table, and could be propelled a few metres.

#### STEP 1

- Take out the staple and open the teabag up so it is twice its original size.

## STEP 2

- Empty the tea from the teabag. Open the empty teabag up so that it is in the shape of a long cylinder.

## STEP 3

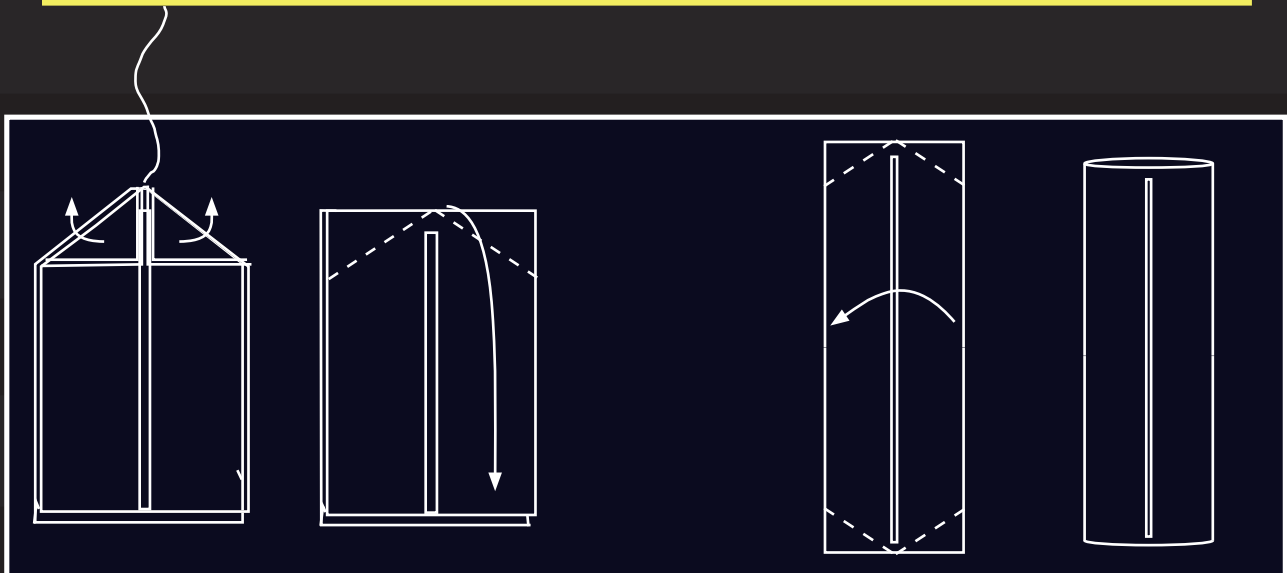
- Place the empty teabag cylinder on the plate so that it is standing up.

## STEP 4

- Light the teabag on fire at the top of the cylinder shape.

## STEP 5

- Once the teabag is lit, take the barbeque lighter away and watch the teabag take off!



## DISPOSAL AND CLEAN UP

- Put the teabag in the rubbish or compost once you are finished doing this Show Off.

## RISK MANAGEMENT

### RISK

Fire could burn skin, hair, clothing, or nearby objects.

### MANAGING THE RISK

Take care of flammable materials around this show off. Ensure hair is tied back.

## SCIENCE EXPLAINED

The teabag burns as it stands in the shape of an empty cylinder, which causes the air inside to be hotter than the air outside. Hot air is less dense than cold air, because the particles of hot air move faster and further from each other, so this causes hot air to rise. The teabag moves up with the hot air around it, and the burnt bag comes back down when it cools down.

## REAL WORLD EXAMPLES

Hot air balloons also use hot air to lift off the ground and fly in the colder air around them!

## 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)