


The Racing Can

FILM

 **Program with the Mouse - The Mystery of the Cloud**

KEY OBJECTIVES

1) **To gain knowledge about electric charge and electrostatic force**

INTRODUCTION

Cloud data is stored not in actual clouds but in buildings that are filled with thousands of hard drives. To use it, we have to be connected to the internet. Have you ever used cloud storage in your life? Probably the answer is yes because since the Covid-19 pandemic began, online teaching and learning have been used by teachers and students. In order to connect to the internet, we need electricity. Now, we are going to learn about static electricity, a phenomenon that involves positive and negative charges.

GUIDING QUESTIONS

- How can we move the empty can without actually touching it?

MATERIALS/PREPARATION

- An empty aluminum can
- A Balloon or a PVC pipe
- A dry shirt (wool works great) and dry hair (properly dry, not oily)

TOPICS

Static electricity physics

KEYWORDS

Electric charge electrostatic force
static electricity

LEVEL

Primary School Secondary School

RESOURCE TYPE

Experiment

INTENDED AUDIENCE SIZE

from 10 to 100 students in one session

MODE OF DELIVERY

Live online

TIME FOR ACTIVITY

5-10 min.



The Racing Can



TASKS/PROCEDURE

- 1 Using a pen, draw a starting line and a finish line on the table
- 2 Put your empty can at the start line
- 3 Rub the PVC pipe against the shirt, or blow up the balloon and then rub it against your hair several times (at least five times)
- 4 Bring the pipe or balloon close to the can, without actually touching it. Observe what happens
- 5 Race the can until it crosses the finish line. You can have a race with your family or friends too!

AUTHORS AND SOURCES

Submitted by Anette Evifania and Pesta Sigalingging, Indonesia

FOSTERING DISCUSSIONS

- 1 What happens if you bring the pipe or balloon close to the can?
- 2 What happens if you rub the balloon on our heads or the pipe on the cloth fast or slow?
- 3 What if we rub it for a long time? Will it go further?

POSSIBLE EXTENSIONS

- 1 Try to rub PVC pipe on different types of fabric. Will the result be the same?
- 2 Try to rub the balloon on your hair. Quickly move the balloon near the stream of water. Observe what happens to the water stream!