How Our Lungs Work!

Science Film Festival Knowledge Through Entertainment

FILM

- The Apple Core - Mini-Organs
- 2' Life Changing Minutes - Why Do You Have to Interfere with my Pleasure of Smoking

KEY OBJECTIVES

1. To understand how our lungs work

INTRODUCTION

Our lungs are amazing. They are the primary organs of the respiratory system in humans. Humans have two lungs, a right lung, and a left lung. The lungs are respiratory organs that are vital to the breathing process. Under the lungs is the diaphragm which is a dome-shaped muscle that works with your lungs to allow you to inhale (breathe in) and exhale (breathe out) air. Keeping our lungs healthy is a brilliant idea, and the best way to keep our lungs healthy is not to smoke. Smoking isn't good for any part of our body, and our lungs especially hate it. We can also take care of our lungs by exercising.

TOPICS
Respiratory systems

KEYWORDS
Lungs | breathe | respiratory systems

LEVEL
All Ages

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.

GUIDING QUESTIONS

- Do you know how our lungs work? Let's find out by making a model lung.

MATERIALS/PREPARATION

- 1.5-litre empty plastic bottle (1)
- Balloon (2)
- Scissors
- Pencil (1)
- Modeling clay (1 lump)
- Rubber band (1)
- Straw (1)

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TASKS/PROCEDURE

1. Cut the plastic bottle into two using scissors. We will use only the top part.
2. Slice the first balloon into two. Use one slice to seal the bottom of our plastic bottle. Make sure that the bottle is sealed tightly. This part simulates our diaphragm
3. Next, get a second balloon and insert a straw into its opening. Tie them with a rubber band. This part simulates our trachea and lungs
4. Take the clay lump. Using a pencil, puncture a hole in the middle, all the way through.
5. Insert the other end of your straw into the clay hole and insert them into the bottle's mouth in step 2
6. Make sure the mouth of the bottle is properly sealed by squeezing the clay around its edges and the straw
7. Now, observe how our model lung works. Carefully pull the balloon on the bottom and see whether the balloon inside the bottle 'breathes'?

FOSTERING DISCUSSIONS

1. What happens to the balloon inside the bottle when you pull the balloon on the bottom?
2. What conclusion can you draw from this experiment?

AUTHORS AND SOURCES

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- kidshealth.org/en/kids/lungs.html
- www.science-sparks.com/breathing-making-a-fake-lung/