

Make a Model Lung

Discover how cigarette smoking affects our health



INTRODUCTION

Scientists often use models to help them to explain how things behave, to help them predict what might happen and to encourage discussions. A glass jar can be used as a very effective model of a human lung to encourage children to consider the impact of smoking cigarettes on the body.

This activity is intended as a very visual teacher demonstration to stimulate discussion with upper primary school children and help them make sensible choices for their own bodies.

LEARNING INTENTIONS



- ☑ To understand how cigarette smoking can affect our lungs
- ☑ To observe closely
- ☑ For children to realise that they can be responsible for aspects of their own health

RESOURCES (PER GROUP)



- A kilner jar (or empty scented candle jar with a metal lid or ceramic tile to act as a lid)
- Strips of newspaper, approximately 6x2 cm
- Matches or lighter
- A piece of sponge which will fit inside the lid of the jar, e.g. a kitchen sponge
- Two wide rubber bands

WHAT TO DO:

Today we are going to be medical researchers

1. Show the children a sponge and have them share ideas about how this might be a good representation of the lungs. Explain that the small holes in the sponge are similar to the tiny air sacs in our lungs.
2. Attach the sponge to the lid of the jar using the two rubber bands at right angles to each other, explaining that the sponge is representing just one of our lungs.
3. Explain that each strip of paper will represent a cigarette and the jar will be the body into which the cigarette smoke will enter. Light a piece of the paper, drop it into the jar and close the lid. A lot of smoke will be trapped in the jar and the flame will quickly be extinguished due to the lack of oxygen.
4. Leave the jar closed and repeat the activity every 15 or 30 minutes throughout the day. There is no need to clear the paper out of the jar each time. Near the end of the day, open the jar, remove the bands from the sponge and show the class the blackened surface.
5. Remind the children that this is after just one day's "smoking" and ask them to predict how this might change further over time, leading to a wider discussion about making healthy choices.

KEY QUESTIONS

1. What do you think made the sponge blacken?
2. How do you think the lungs will change over time: another day, week, month, year or years?
3. Why do you think cigarette smoking is bad for you?
4. Which parts of the body does the cigarette smoke harm? Why do you think this?
5. What effect might smoking have on your general health?

KEY VOCABULARY



Breathe/ breathing	Respiratory system
Lungs	Smoke
Oxygen	Nicotine
Health	Chemicals

EXTENSION / FOLLOW UP ACTIVITIES

Children could research the effects of smoking on the body in a variety of different ways.



ADDITIONAL RESOURCES (IF REQUIRED):

- N/A

ANTICIPATED ACTIVITY TIME: **5 MINS** at regular intervals throughout the day.
15 MINS to discuss findings.