

# Frankenstein's New Lung

## Intended Grade Level

6-8 Grade Health Education

## Summary

Students will be asked to build a fake lung. They will be given a list of materials and directions for how to build the lung. Then they will answer questions relating to this process and how smoking affects it. The straw represents the windpipe, the knotted balloon represents the diaphragm, and the balloon represents the lung.

## Materials

Plastic bottle

2 Balloons

Straw

Play-Doh

Rubber band

Scissors

Standard	Goal	Objectives
ICS1: Comprehend Core Concepts	Goal 1.1: Students will comprehend core concepts related to health promotion and disease prevention to enhance health.	6-8.H.1.1.1: Analyze the relationship between behaviors, body systems, and wellness. 6-8.H.1.1.8: Examine the consequences and the likelihood of injury or illness if engaging in unhealthy behaviors.
ICS5: Decision Making	Goal 1.1: Students will demonstrate the ability to use decision-making skills to enhance health.	6-8.H.5.1.6: Choose healthy alternatives over unhealthy alternatives when making a decision.

## Alternatives

Students can make a smoker lung using a small and narrow straw like the ones used for stirring coffee. This would also work well as a demonstration.

## Notes

For smaller children, it may be better to have bottles already cut. It's easier to do with a harder plastic water bottle. A coke bottle works fine with tape used to reinforce it. For pictures and video, visit <http://www.science-sparks.com/breathing-making-a-fake-lung/>.

Name \_\_\_\_\_

## Frankenstein's New Lung

Dr. Victor Frankenstein needs your help to create a new lung for his monster. The monster likes to smoke cigarettes and has ruined one of his lungs. Your task is to help Dr. Frankenstein make a new lung for his monster.

### Materials

Plastic bottle  
Straw  
Rubber band

Scissors  
2 Balloons  
Play-Doh

### Directions

1. Remove the bottom of the bottle.
2. Tie a knot on one of the balloons. Then snip off the untied end of that balloon.
3. Stretch the tied balloon piece around the bottom of the plastic bottle.
4. Take the other balloon and put the open end through the straw. Then wrap the rubber band around the balloon and straw until it's secure. Make sure not to crush the straw. You want air to flow, so test it by blowing into the straw to see if you can inflate the balloon.
5. Put the straw and balloon into the neck of the bottle. Use the Play-Doh to secure the straw in place and seal the opening of the bottle. Make sure not to crush the straw in the process.



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### Questions

1. Hold the bottle and pull the knot at the bottom of the bottle. What happened?

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2. Why do you think this happened?

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3. What body parts do the straw and balloons represent?

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4. What did smoking do to the monster's lungs?

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5. What other body systems might the monster's smoking have affected?

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6. How are these body systems affected by smoking?

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7. Who else does the monster's smoking affect?

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8. What advice would you give the monster now that he has a new lung?

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