

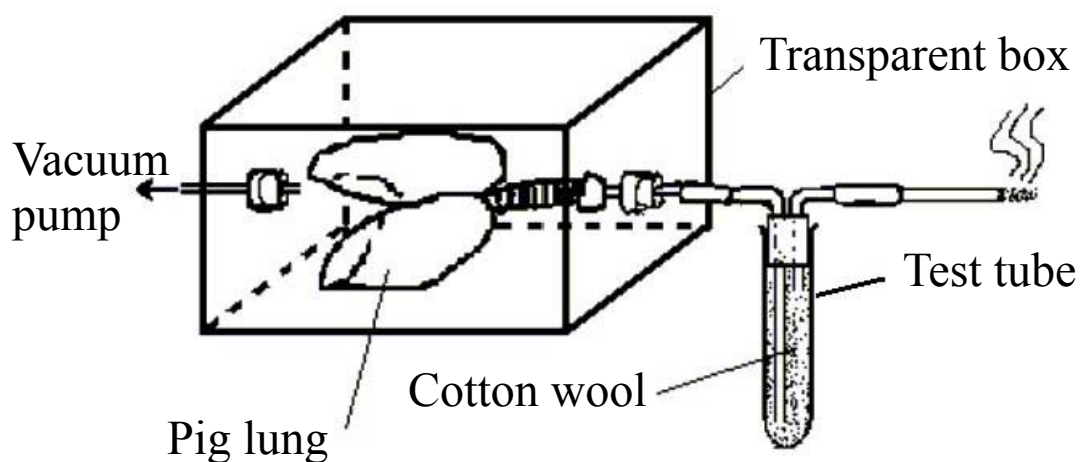
Secondary 2 Integrated Science Worksheet
Unit 7 Living Things and Air: “Smoking and Health”

Name: _____ **Class:** _____ **Date:** _____

A Smoking Pig Lung

The following apparatus is used to simulate the smoking process note

1. the effect of smoking on pig lung
2. the substances in effluent smoke
3. the mechanism of breathing (inhalation and exhalation)



Steps:

- 1 Wash two pig lungs.
- 2 Fix one of the pig lungs in the transparent box as shown in the above diagram, and connect the vacuum pump to the transparent box.
- 3 Light the cigarette and switch on the vacuum pump.
- 4 When the pig lung is expanded, switch off the vacuum pump.
- 5 Switch the vacuum pump on and off until the cigarette is burnt completely.
- 6 Light 10 more cigarettes by repeating steps 3 to 5.
- 7 Remove the pig lung from the box and compare it with the untreated pig lung.

Secondary 2 Integrated Science Worksheet
Unit 7 Living Things and Air: “Smoking and Health”

Name: _____ **Class:** _____ **Date:** _____

Discussion:

1. What is the observable difference between the pig lungs with and without smoking?

2. Dissect the two pig lungs, and observe the differences between them immediately.

3. Carefully observe the cotton wool inside the test tube. What do you see? What does it demonstrate?

4. Compare the difference between rates of burning of cigarettes when the vacuum pump is on and off. Explain it with the “breathing mechanism”.
