

11 Gas exchange and the lungs – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English	Write it 3 times (English)		
Gas exchange	_____	_____	_____
oxygen	_____	_____	_____
carbon dioxide	_____	_____	_____
diffusion	_____	_____	_____
surface area	_____	_____	_____
blood supply	_____	_____	_____
ventilation	_____	_____	_____
alveoli	_____	_____	_____
trachea	_____	_____	_____
bronchi	_____	_____	_____
bronchioles	_____	_____	_____

Recall

Gas exchange is how **oxygen** gets into the blood and **carbon dioxide** leaves it, by **diffusion**.

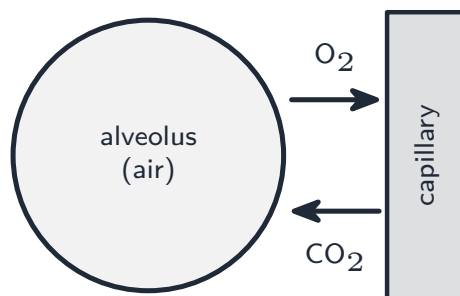
New ideas

Read these first, then do the Practice.

■ 1 A good gas exchange surface

A good surface has: a large **surface area**, a **thin** wall (short distance), a good **blood supply**, and good **ventilation** with fresh air.

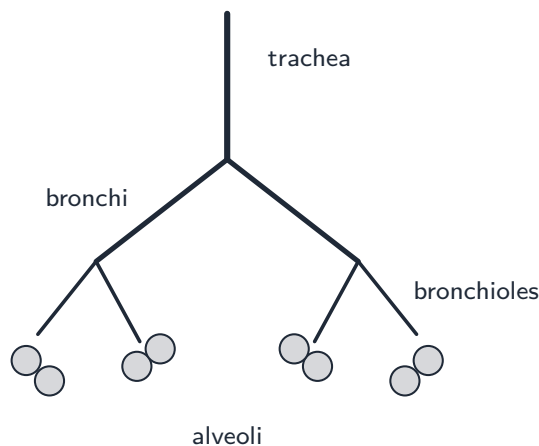
The **alveoli** (tiny air sacs) have all four:



thin wall: short distance

■ 2 The breathing system

Air travels in through these parts:



trachea (windpipe) → **bronchi** → **bronchioles** → **alveoli**.

Watch out: a good gas-exchange surface has a **large surface area**, **thin walls**, a **good blood supply** and good ventilation – the alveoli have all four. Gas exchange is by **diffusion**, not active transport.

Practice

Try these in order.

11.1 What is *gas exchange*? [1]

11.2 Give two features that make the alveoli good for gas exchange. [2]

11.3 In which tiny air sacs does gas exchange happen? [1]

11.4 Put these in order, from the throat to the air sacs: bronchioles, trachea, alveoli, bronchi. [2]

11.5 Which gas diffuses from the alveoli into the blood? [1]

11.6 Challenge. Explain how **two** features of an alveolus make gas exchange fast. [2]