

9 The heart and circulation – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)		
circulatory system	循环系统	_____	_____	_____
pump	泵	_____	_____	_____
heart	心脏	_____	_____	_____
blood vessels	血管	_____	_____	_____
valves	瓣膜	_____	_____	_____
mammal	哺乳动物	_____	_____	_____
double circulation	双循环	_____	_____	_____
lungs	肺	_____	_____	_____
high pressure	高压	_____	_____	_____
oxygen	氧气	_____	_____	_____
muscle	肌肉	_____	_____	_____
septum	隔膜	_____	_____	_____
atrium	心房	_____	_____	_____
ventricle	心室	_____	_____	_____
oxygenated	含氧	_____	_____	_____

English	中文	Write it 3 times (English)
deoxygenated	缺氧	_____

Recall

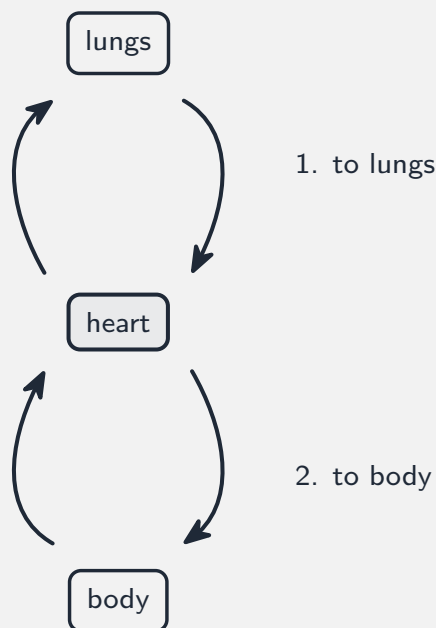
The **circulatory system** 循环系统 carries blood around the body. It has a **pump** 泵 (the **heart** 心脏), **blood vessels** 血管, and **valves** 瓣膜 for one-way flow.

New ideas

Read these first, then do the Practice.

■ 1 Double circulation

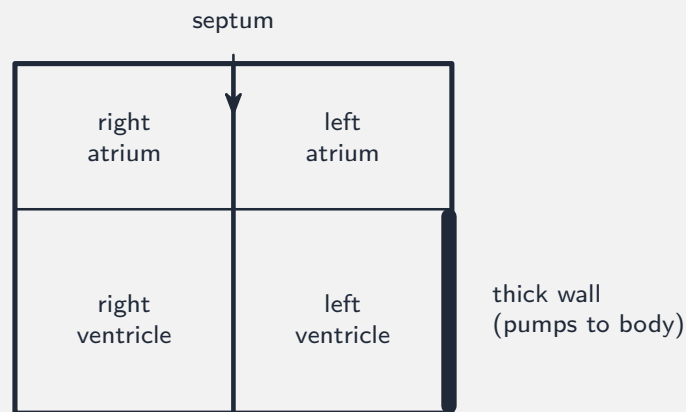
A **mammal** 哺乳动物 has a **double circulation** 双循环: the blood passes through the heart **twice** on each trip round the body —once to the **lungs** 肺, once to the rest of the body.



This lets the blood be pumped again at **high pressure** 高压 before going to the body, so **oxygen** 氧气 arrives quickly.

■ 2 The heart

The heart is made of **muscle** 肌肉. The **septum** 隔膜 divides it into a right and a left side; each side has an **atrium** 心房 (top) and a **ventricle** 心室 (bottom):



- the left ventricle has the **thickest wall** —it pumps blood all round the body;
- the septum keeps **oxygenated** 含氧 and **deoxygenated** 缺氧 blood apart.

Watch out: the **left ventricle** has the thickest wall because it pumps blood all round the body; the right side only pumps to the lungs. The **septum** keeps oxygenated and deoxygenated blood from mixing.

Practice

Try these in order.

9.1 Name the three parts of the circulatory system. [3]

9.2 What does "double circulation" mean? [2]

9.3 Name the four chambers of the heart. [2]

9.4 Why is the wall of the left ventricle the thickest? [1]

9.5 What is the job of the septum? [1]

9.6 Challenge. Explain why the wall of the left ventricle is much thicker than the wall of the right ventricle. [2]