

# 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

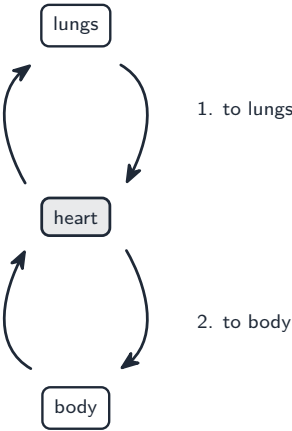
The **circulatory system** 循环系统 carries blood around the body. It has a **pump** 泵 (the **heart** 心脏), **blood vessels** 血管, and **valves** 瓣膜 for one-way flow.

## New ideas

Read these first, then do the Practice.

### ■ 1 Double circulation

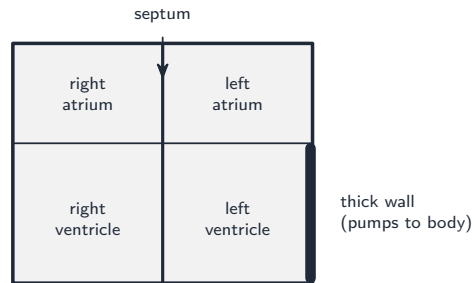
A **mammal** 哺乳动物 has a **double circulation** 双循环: the blood passes through the heart **twice** on each trip round the body — once to the **lungs** 肺, once to the rest of the body.



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]