

Chapter 1: The Respiratory and Circulatory System

Worksheet 2: Human Circulatory System

Date: / /

-Objective:

- Identify different parts of the blood circulatory system and the function of each part.
- Describe the circulations of the blood in the human body.
- Relate the heart pulse rate to the body size and the level of exercise.

The three parts of the circulatory system are:

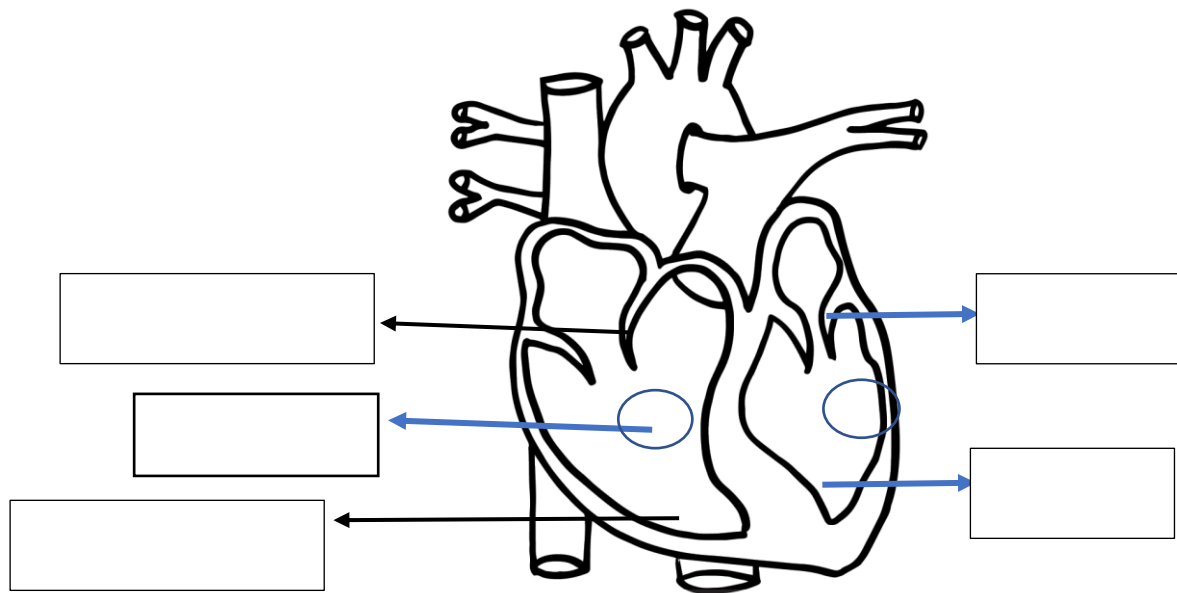
- 1) The Heart 2) Blood 3) Blood Vessels

1. The Heart

a) The function of the heart is:

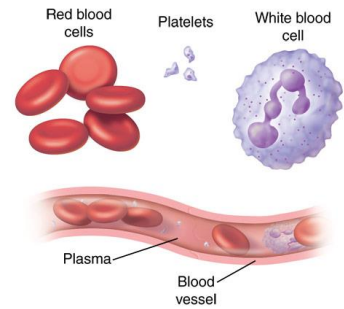
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b) Label the four chambers of the heart. Color the side containing **Oxygen rich blood with red**, and the side containing **Oxygen poor blood with blue**.



2. The Blood:

Blood has four main components and each has a specific function:



Blood component	Function

Question:

Blood has many components; answer the following about these components:

1. What is the function of red blood cells in your body?

.....

2. Adam fell in the playground and his knee started to bleed. Which component of the blood helps to stop the bleeding?

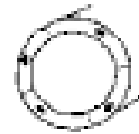
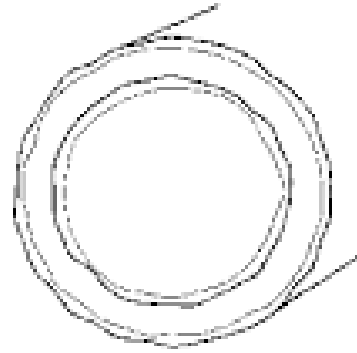
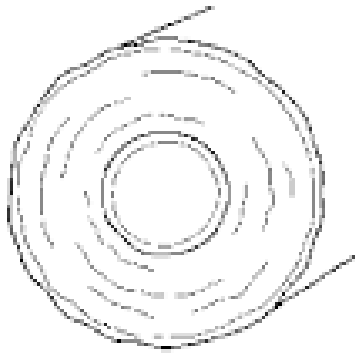
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3. Maya had an infection in her throat. Which blood component helps Maya to fight this infection?

.....

3. The blood vessels:

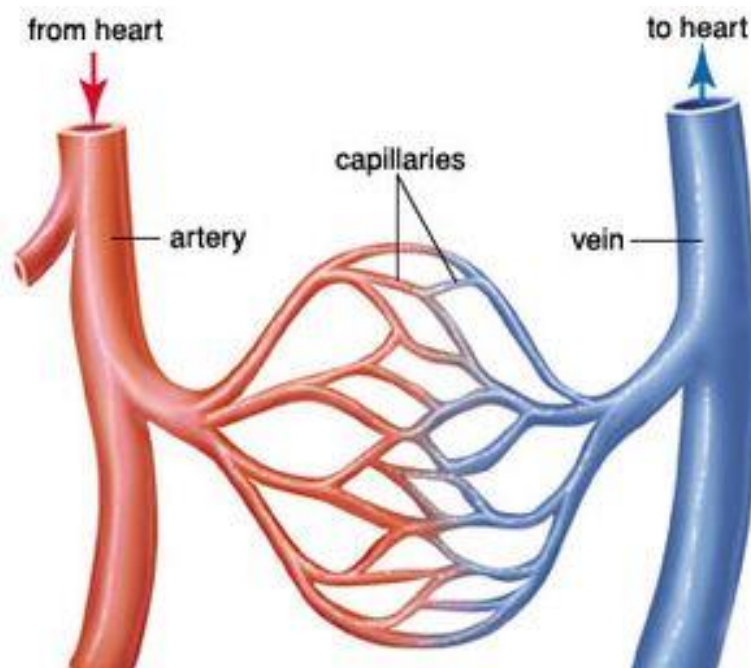
The picture below shows the three kinds of blood vessels. Write the name of the blood vessel and the directing of flow under its picture.



- Name:

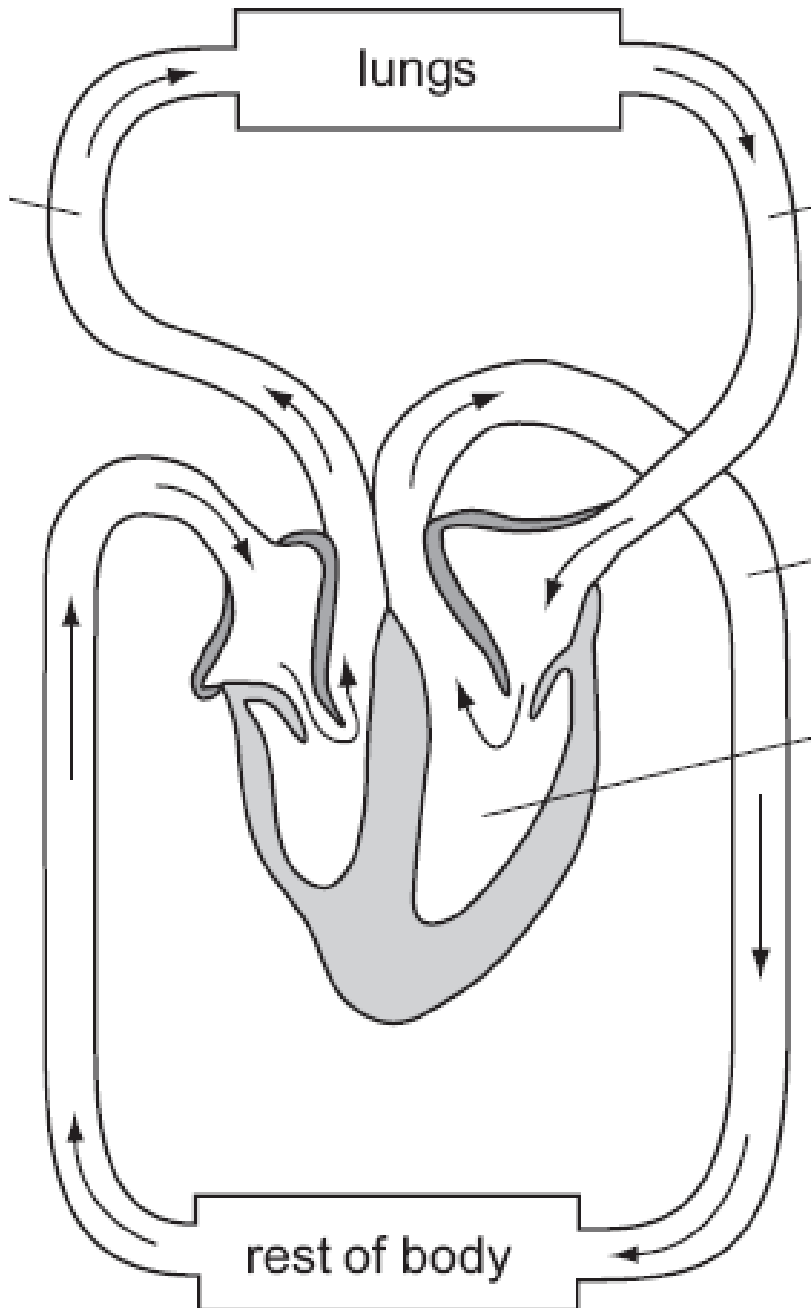
-Direction

of flow:



- **Blood circulations:**

Color the parts carrying **Oxygen poor blood with blue**, and those carrying **Oxygen rich blood with red**.



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Worksheet 3: Comparing Heart Rate

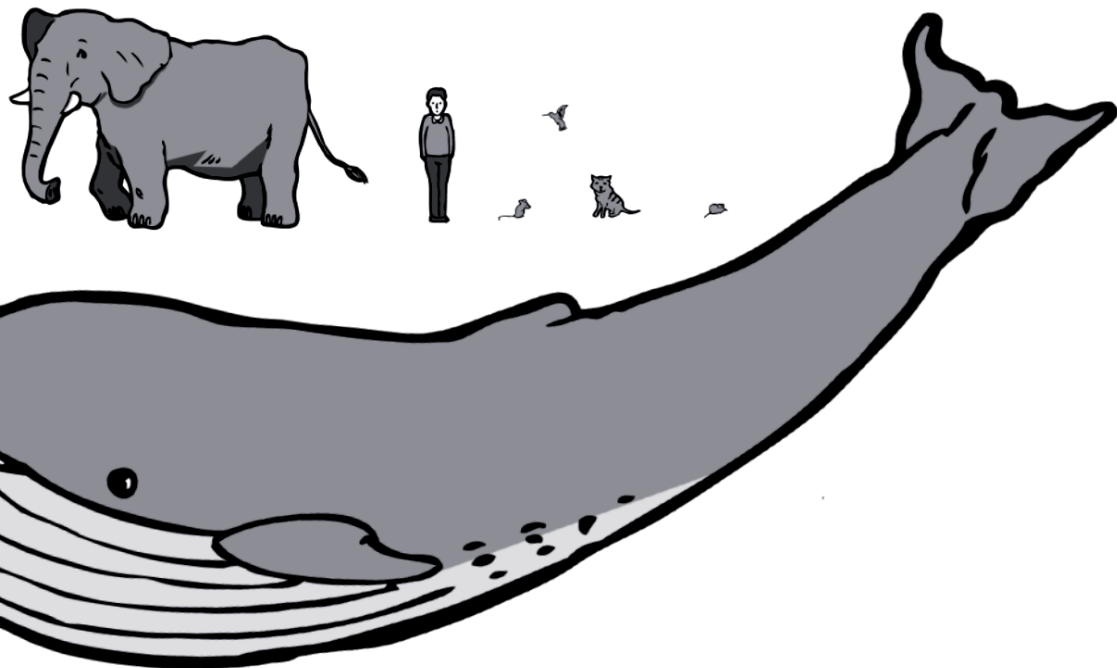
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Objective/s:

- Compare heart rate in animals of different body size.

Part 1:

Some animals have faster heartbeats than others. The table shows some of them.



Animal	Heartbeat in beats per minute
human	70
elephant	30
mouse	500
blue whale	10
cat	150
humming bird	1300

1 a Which animal has the fastest heartbeat? _____

b Which animal has the slowest heartbeat? _____

2 a Which animal is the biggest? _____

b Which animal is the smallest? _____

3 a List the animals in the table according to their heartbeats. Start with the slowest heartbeat.

_____	_____
_____	_____
_____	_____

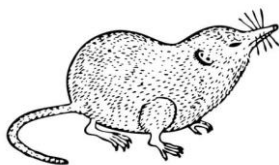
b What pattern do you notice in the results?

4 a Write a conclusion about animal heartbeats from these results.

b Predict the heartbeat of a:

horse _____ shrew _____

c Do some research to find out if your prediction is true or not. Does the evidence support your prediction?



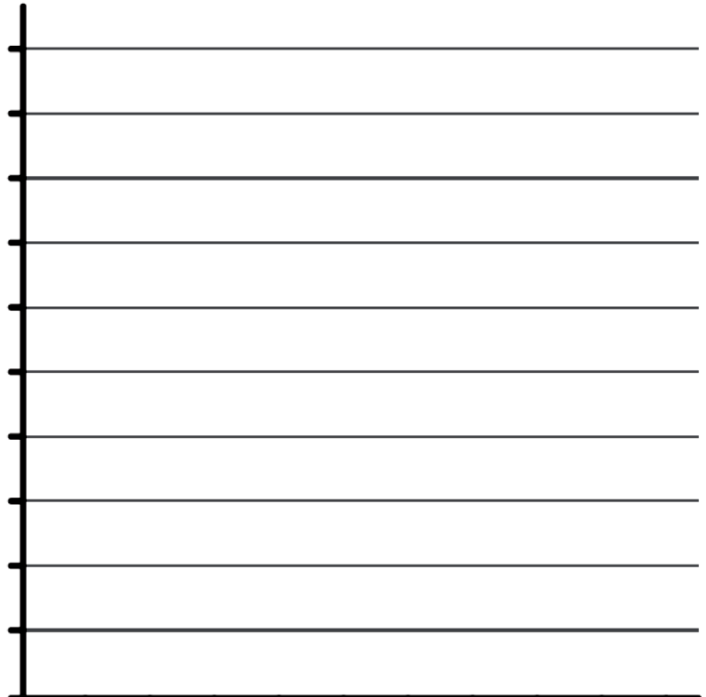
Part 2:

Bo and Fang measured the pulse rate of some of their friends before and after exercising for three minutes. These are their results.

Name	Pulse rate before exercise	Pulse rate directly after exercise
Bo	91	120
Fang	88	122
Ming	90	128
Kumei	89	125

1 What equipment did they need to measure the pulse rates?

2 Draw and label a bar chart of the pulse rates measured.



3 a Use the results to draw a conclusion.

b Predict what would happen to the pulse rates if the friends exercised for longer.

Part 3:

1. The table below represents the Heart pulse rate of different animals.

Animal	Heart Pulse Rate (.....)
A	50
B	270
C	550

a. What is the **unit** used to measure the heart pulse rate?

.....

b. Which animal is the **smallest**? Explain your answer.

.....

2. Theresa was exercising. She took her **heart pulse rate** before exercising, and immediately after exercising.

Reading 1: 130

Reading 2: 90

Which reading was taken immediately after exercising?

Explain why.

.....

