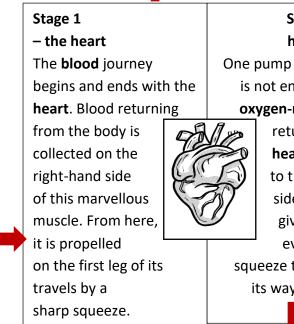


Reading extract and questions: Year 5 – 6



Year 5 – 6 Circulation Set A/B

It takes less than a minute for blood to complete a full circuit of an individual's body. It might not be the longest journey in the world but is one of the most important: our very existence depends upon it. So, let's take a closer look at our amazing circulation system.



Stage 3 – the heart (again) One pump of the heart is not enough so the oxygen-rich blood is

returned to the **heart**, this time to the left-hand side. Here, it is given another, even mightier

squeeze to send it on its way around the body.

Stage 2 – the lungs

The main job of blood is to take **oxygen** to the different parts of the body to make them work properly. For this, it first needs to head to the **lungs**, where it squeezes into tiny tubes called **capillaries**. Here, it picks up **oxygen** from the air we breathe and carries it on **red blood cells**.

Stage 6 – veins

The vessels that carry **blood** back to the heart are called **veins.** By this stage, the **red blood cells** have lost most of their **oxygen** and need to be replenished. The **veins** look blue, but don't be fooled – it's just a trick of the light. Inside the vessel, the blood is as red as ever. However, it is beginning to lose speed and momentum. What's needed is another hearty push!

Stage 5 – muscles and organs

Every **muscle** that moves, every **organ** that performs a vital role in our health and wellbeing, from our brains to our little toes, needs **blood**. Once again, it is squeezed into tiny **capillaries** that intertwine with the target tissue. This allows the **oxygen (and some nutrients)** to be transferred to where it is needed. Stage 4 – arteries

The vessels that carry **blood** away from the heart are called **arteries**. Usually, they carry oxygenated blood – the only exception is the **pulmonary artery**, which carries blood to the **lungs**. **Arteries** are long tubes which divide and branch off as they spread out around the body, getting thinner and narrower the further away

from the heart they get.



Did you know?

The main ingredients of blood are **red blood cells**, **white blood cells** (infection fighters) and **plasma**, the straw coloured liquid that keeps the system flowing.

Average-sized adults have about **five litres** of blood in their bodies.

Questions for Circulation Set A PRIMARY Vocabulary:
1. Look at the first paragraph. Find and copy one word that means <i>a single person</i> .
2. Look at Stage 1 .'on the first leg of its travels by a <u>sharp</u> squeeze'. In this sentence the word sharp is closest in meaning to:
interesting strong two-sided wonderful 3. What does <i>mightier</i> mean?
Retrieval 4. Where is the blood that returns from the body collected?
 5. According to the text, what is the main job of blood? 6. In which direction do arteries carry the blood?
7. Apart from oxygen, what else does blood transfer to different parts of the body?
Inference 8. Apart from having lost most of its oxygen, how else has the blood changed by the time it reaches the veins?
9. What do the white blood cells do?
Summarise 10. Which of the following would be the most suitable summary of the whole text? Tick one.
It describes how the heart works. It describes the passage of blood around the body. It explains how to stay healthy.

It describes what blood is made of.

Authorial intent

11. *What's needed is another hearty push!* Give **two** reasons why the author used the word *hearty*.

a	 	 	 _
b.			

Compare

12. According to the text, give one way that arteries are:

a. similar to veins

b. different from veins.

PIXE Questions for Circulation Set B PIXE English Vocabulary:
1. Look at the introduction. What does <i>existence</i> mean? Tick one.
travel way out survival circulation 2. Look at Stage 1. Find and copy one word that means <i>pushed</i> .
2. Look at stage 1. This and copy one word that means pashed.
3. Look at Stage 6. What does <i>replenished</i> mean?
Retrieval 4. What are the tiny tubes in the lungs called?
5. What happens to the arteries as they spread out around the body?
6. In which direction do veins carry the blood?
 7. Which two parts of the body are given as examples of things that need oxygen from the blood. a b
Inference 8. How does the author feel about human circulation? Use evidence from the text to support your answer.
9. What is one thing that has not changed about the blood when it gets to the veins?

Meaning as a whole

10. Draw lines to match each section to its main content.

Stage 2	The blood picks up oxygen.
Stage 3	The heart pumps oxygen towards the rest of the body.
Stage 4	Oxygen is transferred to different parts of the body.
Stage 5	Oxygen-rich blood is carried around the body.

Predict

11. Based on what you have read, predict what might happen if we did not have white blood cells.

Authorial intent

12. Why have Stage 1 and Stage 3 been placed right next to each other?

Answers for Circulation

Set A:

Vocabulary:

- individual
- 2. strong
- 3. stronger/more powerful/more forceful

Retrieval:

- 4. the right-hand side of the heart
- 5. to take oxygen to the different parts of the body (to make them work properly)
- 6. away from the heart
- 7. nutrients (and some nutrients)

Inference:

- 8. It has lost speed and momentum (accept either speed or momentum)
- 9. fight infection

Summarise:

10.

It describes how the heart works.

It describes the passage of blood around the body.

It explains how to stay healthy.

It describes what blood is made of.

Authorial intent:

11.

- a. It refers to the heart. It is a play on words as the text is about the heart.
- b. Hearty also means strong or forceful.

Compare:

12.

a. Accept any of the following:

- They are tubes.
- They carry blood.
- They are connected to the heart.

b. Accept any of the following

- They carry blood away from the heart instead of to it.
- The flow has more speed and momentum.
- They don't look blue from the outside.

(Don't accept 'They carry oxygenated blood' as this is not true of the pulmonary artery.)

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Answers for Circulation

Set B:

Vocabulary:

1. survival

2. propelled

3. filled up again/resupplied/topped up

Retrieval:

4. capillaries

- 5. They divide and branch out. They get thinner and narrower.
- 6. back towards the heart
- 7. brain/(little)toes

Inference:

8. The author is very impressed and thinks it is special (ensure this is backed up by examples)/Thinks it is amazing/marvellous/ Words like *amazing* and *marvellous* are used to describe it, or parts of it. It is essential and we couldn't live without it.

9. It is still red.

Meaning as a whole:

10.

Stage 2][The blood picks up oxygen.
Stage 3		The heart pumps oxygen towards the rest of the body.
Stage 4		Oxygen is transferred to different parts of the body.
Stage 5		Oxygen-rich blood is carried around the body.

Predict:

11. We might get ill/infected because we couldn't fight infections.

Compare:

12. to show that they both involve (two sides of) the same part of the body: the heart/because they are both about the heart

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