



TEACHER'S NOTES

AMAZING BLOOD

OVERVIEW

Aimed at **key stage 3** pupils.

In this activity, the class will answer multiple choice questions on red blood cells.

LEARNING OBJECTIVES

To discover some interesting and unusual facts about red blood cells

CURRICULUM LINKS

KS3: Life processes are supported by the organisation of cells into tissues, organs and body systems

you will NEED

Student worksheets

Mini-whiteboards or electronic interactive voting pads (optional)

Activity

After watching the film of **Pamela's story**, pupils could spend 10 minutes completing this quiz.

It can be organised as an individual task or a group quiz. Mini-whiteboards or electronic voting pads could be used for instant responses to the questions.

ANSWERS

1. Approximately, how many red blood cells are there in 1cm³ of blood?

b. 6,000,000

2. Approximately, how many red blood cells do adult humans make every second?

c. 2,000,000

3. What is the average lifespan of a normal red blood cell?

b. 120 days

4. What is the average lifespan of a red blood cell from someone with Sickle Cell Anaemia?

a. 15 days

5. Approximately, what percentage of your body weight is made up of blood?

c. 8%

6. Where are red blood cells made after birth?

c. Bone marrow

7. How many people have the sickle-cell trait (healthy carriers of the condition) in the UK?

b. 240,000

8. What is the function of a red blood cell?

a. To deliver oxygen and remove carbon dioxide

9. What is another name for a red blood cell?

b. Erythrocyte

10. What cell structure does a red blood cell NOT have?

c. Nucleus

11. What percentage of the blood do red blood cells make up?

b. 40-45%

12. What's the name of the condition when you have a reduced amount of red blood cells?

c. Anaemia

13. Humans can have different types of red blood cells but what are the different types called?

a. A, B, AB, O

14. On average, how long does it take a red blood cell to travel around the whole human body?

a. 20 seconds

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AMAZING BLOOD

- 1** Approximately, how many red blood cells are there in 1cm³ of blood?

a. 6,000 b. 6,000,000 c. 60,000,000
- 2** Approximately, how many red blood cells do adult humans make every second?

a. 200 b. 2,000 c. 2,000,000
- 3** What is the average lifespan of a normal red blood cell?

a. 15 days b. 120 days c. 1.2 years
- 4** What is the average lifespan of a red blood cell from someone with Sickle Cell Anaemia?

a. 15 days b. 120 days c. 1.2 years
- 5** Approximately, what percentage of your body weight is made up of blood?

a. 1% b. 4% c. 8%
- 6** Where are red blood cells made after birth?

a. Spleen b. Lungs c. Bone marrow
- 7** How many people have the sickle-cell trait (healthy carriers of the condition) in the UK?

a. 240 b. 240,000 c. 2.4 million
- 8** What is the function of a red blood cell?

a. To deliver oxygen and remove carbon dioxide b. To help the blood stick together

c. To defend the body against bacteria
- 9** What is another name for a red blood cell?

a. Lymphocyte b. Erythrocyte c. Thrombocyte



AMAZING BLOOD

- 10** What cell structure does a red blood cell NOT have?
- a. Cell membrane b. Cytoplasm c. Nucleus
- 11** What percentage of the blood do red blood cells make up?
- a. 10-20% b. 40-45% c. 80-90%
- 12** What's the name of the condition when you have a reduced amount of red blood cells?
- a. Leukaemia b. Haemophilia c. Anaemia
- 13** Humans can have different types of red blood cells but what are the different types called?
- a. A, B, AB, O b. A, B, P, O c. A, B, C, D
- 14** On average, how long does it take a red blood cell to travel around the whole human body?
- a. 20 seconds b. 20 minutes c. 20 hours



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