

All about blood donation

Blood is amazing...

In just one drop, there are 250 million cells, doing important jobs to keep us healthy. On average, blood travels about 19,000 kilometres every 24 hours – that's the same as travelling from England to France about 20 times!

The need for more blood donors

Perhaps the most amazing thing about blood is that it can be given, or donated, from one person to another. Donating blood is a simple process and most people between the ages of 17 and 65 can give this life-changing gift. A single donation can save up to three lives.

Around 1 in 4 of us will need a blood transfusion at some time in our lives. In England, 6,000 blood donations are needed every day to treat patients in need.

To make things even more complicated, different people have different blood types. This means one person's body can reject another person's blood! Some rare types of blood are more common in certain communities, which is why more blood donations from black, Asian and minority ethnic communities are needed.

What happens after donation?

Once blood has been donated, NHS Blood and Transplant vehicles transport it to a blood centre. At the blood centre, the blood is separated out into its individual parts. First, the white blood cells are filtered out and then the rest of the blood is placed in a centrifuge. A centrifuge is a machine that rotates the blood at such fast speeds, that the platelets, red blood cells and plasma are separated. Doing this makes the most of every blood donation because it means one donation can be used to treat different patients.

WATCH WITH AN ADULT!

Watch the film at home to remind yourself and your adult what you have been learning about in class

View online at:

givingtohelpothers.org



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Component	What patients can it help?
Red blood cells	Patients who have suffered heavy blood loss from accident, surgery or childbirth.
White blood cells	Patients suffering life-threatening infections.
Platelets	Patients with blood cancers, for example leukaemia or bone marrow failure.
Plasma	Lots of different patients, for example, patients with liver disease or severe burn patients.

CHANEL'S STORY

Chanel has suffered from sickle cell disease since she was born. Sickle cell disease makes Chanel's body produce unusually shaped red blood cells, which look like crescent moons, instead of disks.



Chanel's red blood cells are less good at carrying oxygen and are more likely to get stuck in blood vessels as they make their way around the body.

Chanel experiences chronic fatigue, hair loss and periods of intense pain but one of the few treatments that can improve Chanel's symptoms is a blood transfusion. "A blood transfusion changes everything in your body... it makes you feel more energised, rejuvenated; like you have new, healthy blood".



All about blood donation: comprehension questions

1 Watch the video with an adult. Write down one new thing you have learned.

2 How many cells are there in one drop of blood?

3 Look at the first paragraph. Find and copy one word closest in meaning to 'approximately'.

4 Look at the paragraph starting, 'Perhaps the most amazing thing about blood...'. Find and copy a pair of synonyms in this paragraph.



5 Look at the paragraph starting, 'Perhaps the most amazing thing about blood...'.
Perhaps the most amazing thing about blood is that it can be donated.

In the table, put a tick in the correct box to show whether each statement is fact or opinion.

	Fact	Opinion
Perhaps the most amazing thing about blood is that it can be donated.		
A single donation can save up to three lives.		
Most people aged 24 can donate blood.		



6 A significant number of citizens require blood transfusions. Find one piece of evidence from the text which shows this.

7 Look at the section headed: What happens after donation? Which cells are removed before the blood is placed in the centrifuge?

8 Why is donated blood separated into its different components?

9 Look at the table. Which blood cells would be given to patients who have undergone a major operation?

10 Use Chanel's story to describe two features of a healthy red blood cell.

YOUR SCORE!

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All about blood donation: comprehension answers

1 **Answer:** Answers will vary

Skill: Retrieve and record information

2 **Answer:** 250 million cells

Skill: Retrieve and record information

3 **Answer:** 'About'

Skill: Give the meaning of words in context

4 **Answer:** 'Given' and 'Donated'

Skill: Give the meaning of words in context

5 **Answer:** See table below;

	Fact	Opinion
Perhaps the most amazing thing about blood is that it can be donated.		✓
A single donation can save up to three lives.	✓	
Most people aged 24 can donate blood.	✓	

Skill: Make inferences from the text

6 **Answer:** Accept either; 'Around 1 in 4 of us will need a blood transfusion at some time in our lives' or 'In England, 6,000 blood donations are needed every day to treat patients in need.'

Skill: Make inferences from the text

7 **Answer:** White blood cells

Skill: Retrieve and record information

8 **Answer:** To make the most of every blood donation so each donation can be used to treat different patients

Skill: Retrieve and record information

9 **Answer:** Red blood cells

Skill: Retrieve and record information

10 **Answer:** Accept 'Disk-shaped', 'Good at carrying oxygen around the body', 'Travel without getting stuck in blood vessels'

Skill: Make inferences from the text

