

‘Giving to help others’

# Blood and the circulatory system



Giving to help others

**NHS**

Blood and Transplant

# Myth busters!

Do you know which of these statements are **true** and which are **false**?

1. All blood is red

✗ False

2. Blood contains metal

✓ True

3. Blood is made in the heart

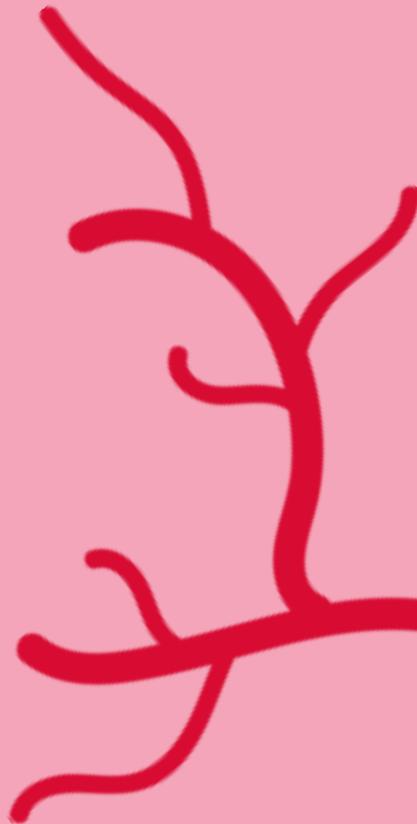
✗ False

4. The average body contains roughly 9 pints (4.5 litres) of blood

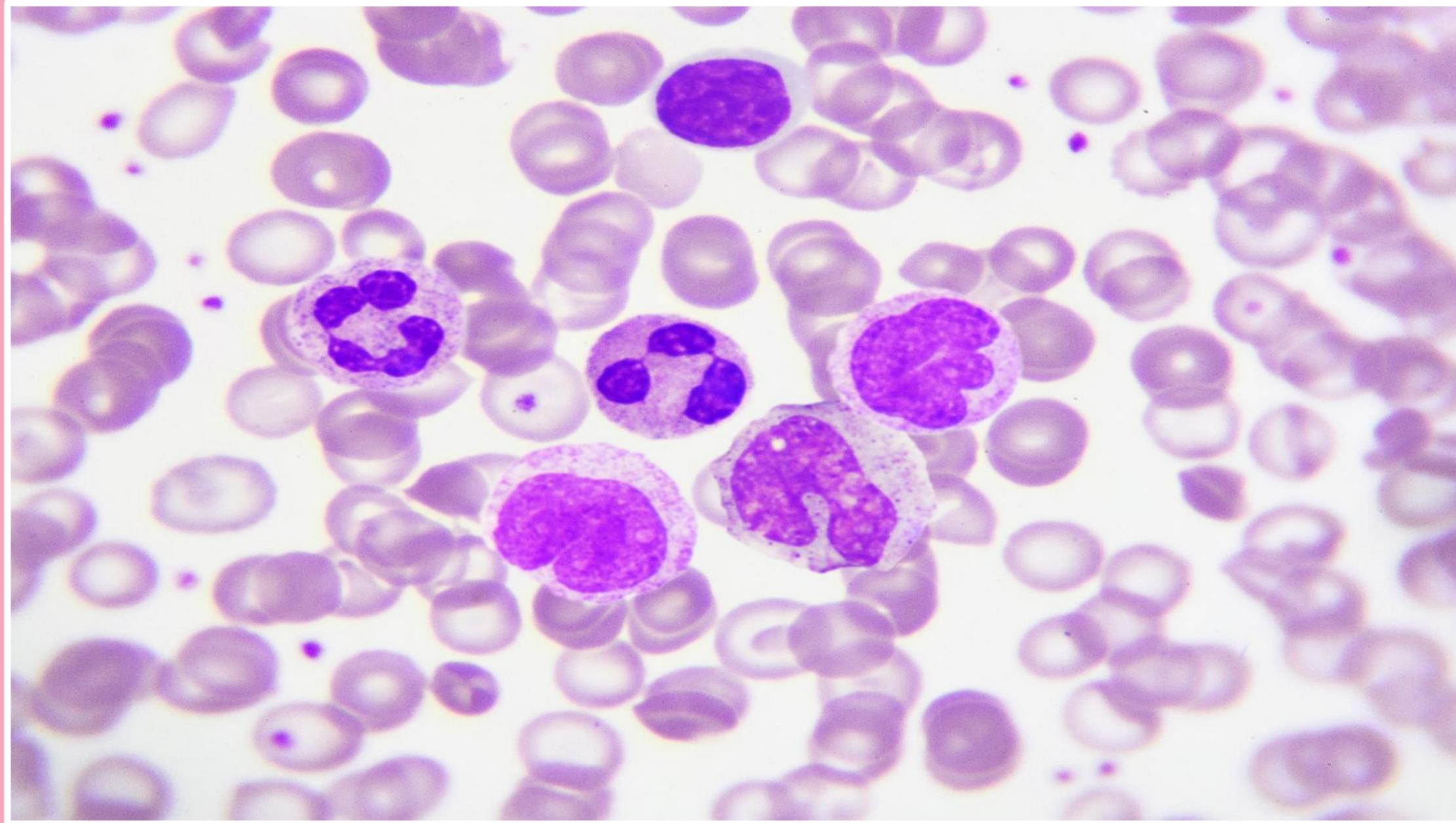
✓ True

5. A person's blood vessels, arranged end-to-end, would stretch the length of the playground – and beyond!

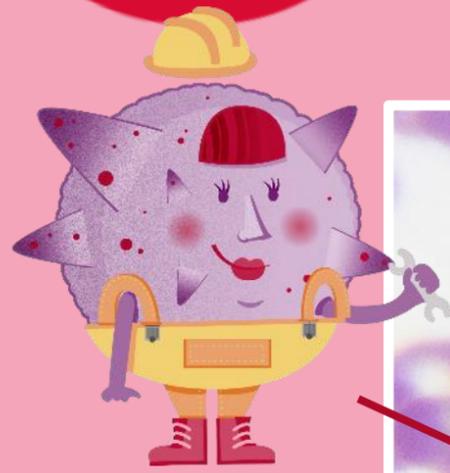
✓ True



# What can you see?



# What's blood made of?



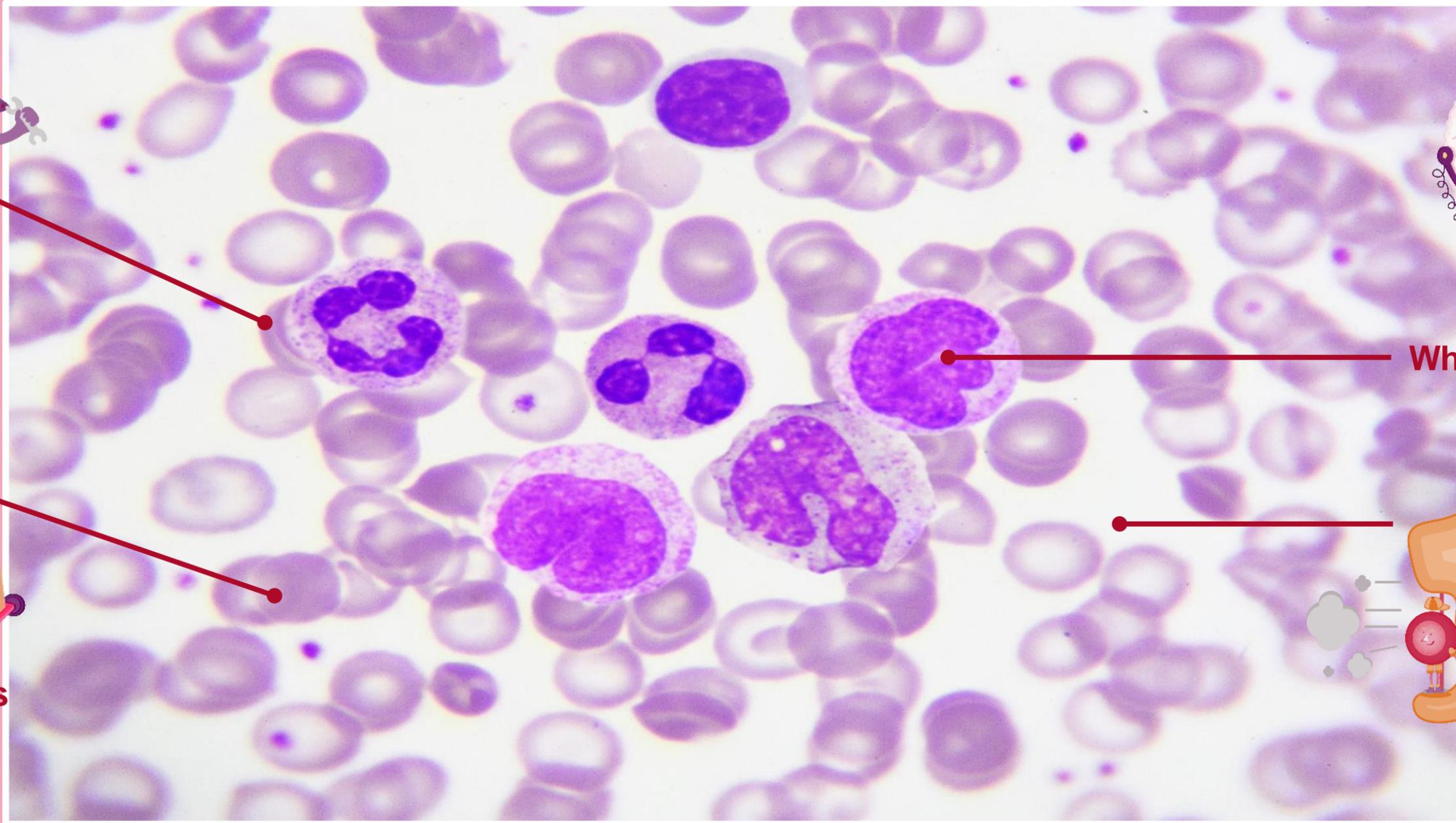
Platelets



White blood cells

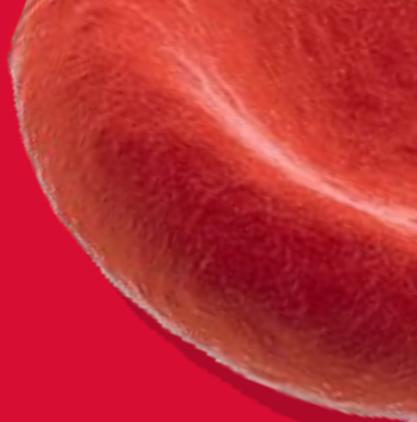


Red blood cells



Plasma

# Red blood cells



“I deliver oxygen  
around your  
body and take  
away waste”

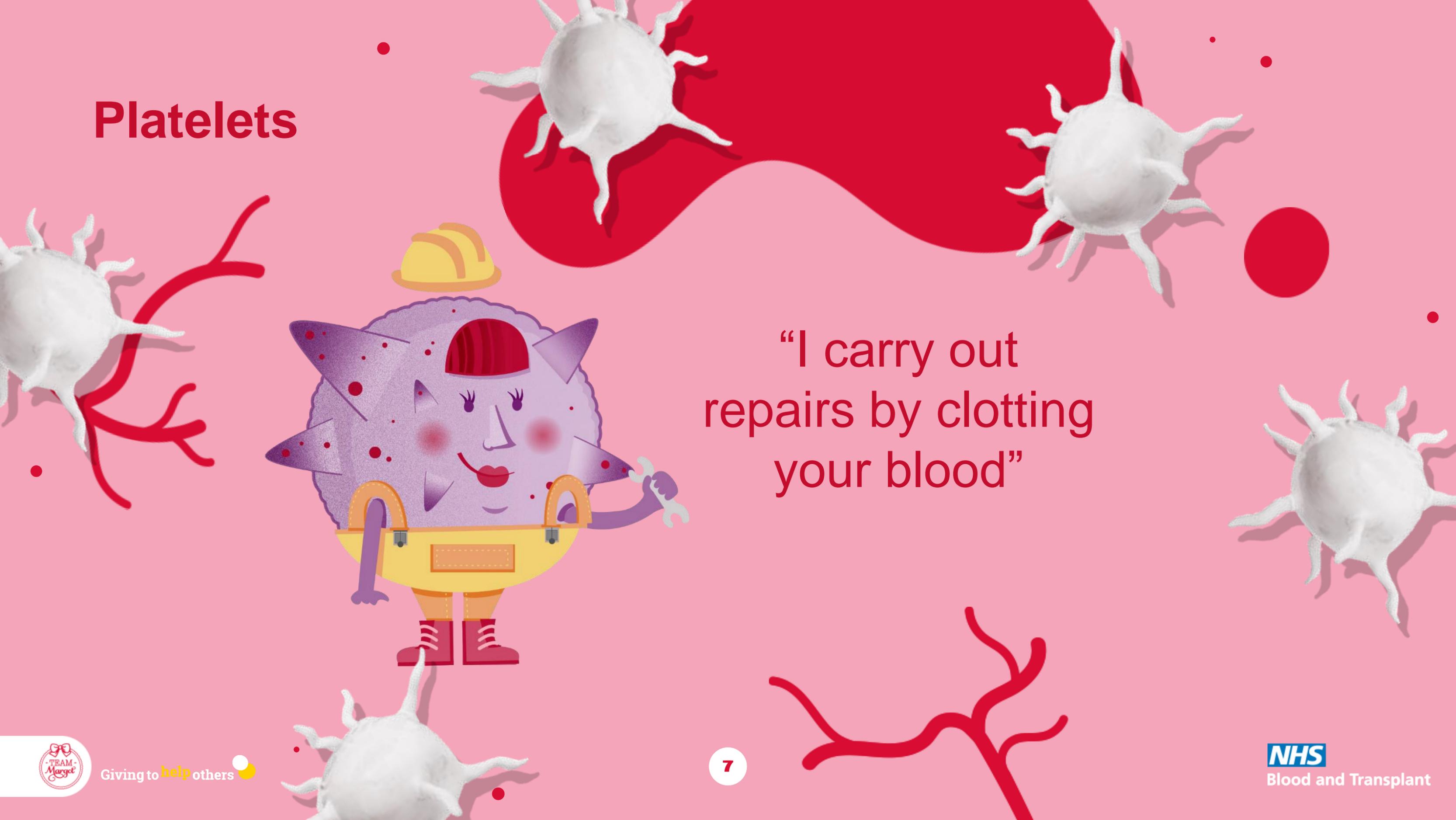


# White blood cells

“I hunt down germs and protect you from disease”



# Platelets



“I carry out repairs by clotting your blood”

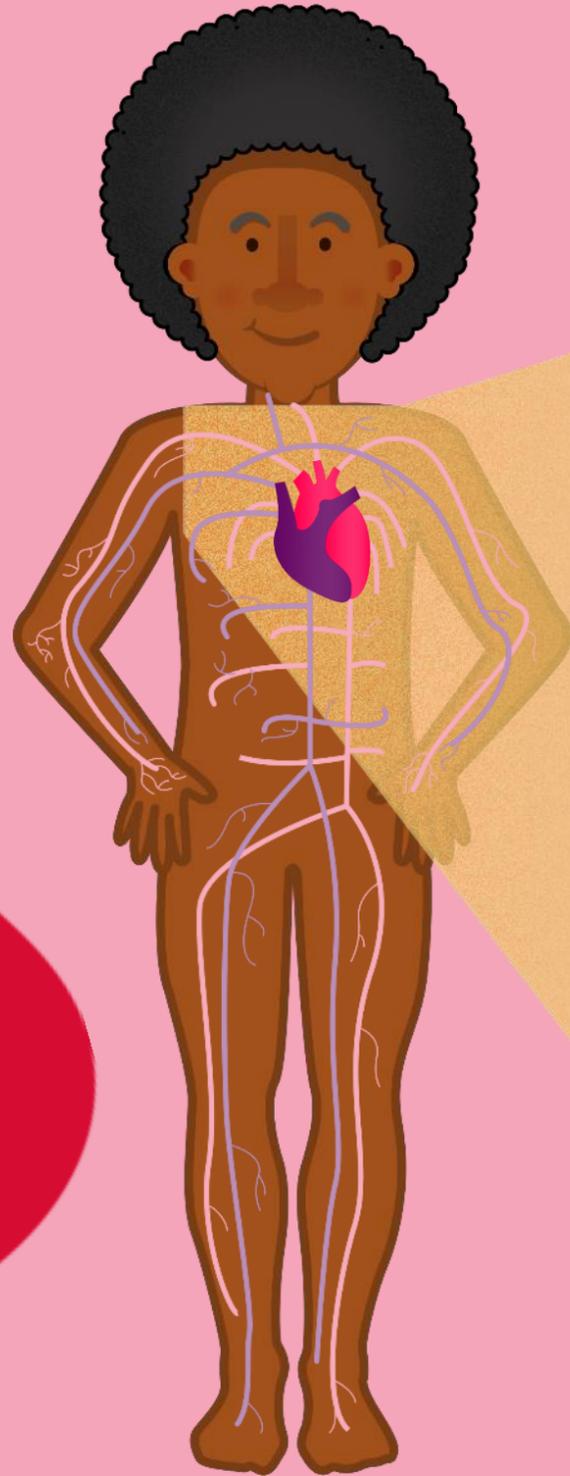


# Plasma

“...and I provide  
the transport”



# How does blood travel?



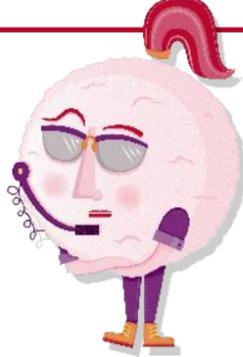
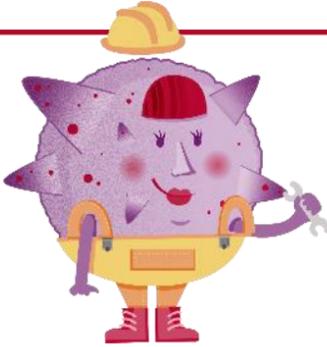
# Finding your pulse



# Can you calculate the quantities?

What you know:

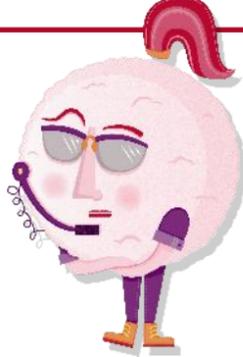
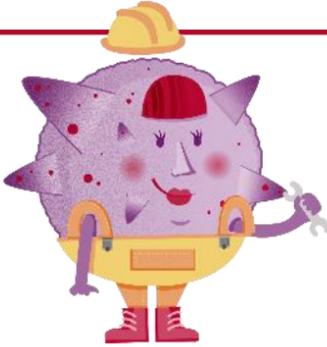
- White blood cells and platelets make up **2%** of a person's blood.
- The ratio of white blood cells *and* platelets to red blood cells is **1:22**.
- **1.5%** of a person's blood is made up of white blood cells.

Blood cells	Percentage of blood (%)
 Plasma	<b>54%</b>
Red blood cells 	<b>44%</b>
 White blood cells	<b>1.5%</b>
Platelets 	<b>0.5%</b>

# Can you calculate the quantities?

What you know:

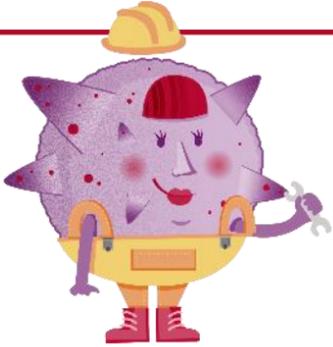
- A person's blood contains three times more white blood cells than platelets.
- The ratio of white blood cells *and* platelets to red blood cells is **1:22**.
- White blood cells and platelets make up **2%** of a person's blood.

Blood cells	Percentage of blood (%)
 Plasma	<b>54%</b>
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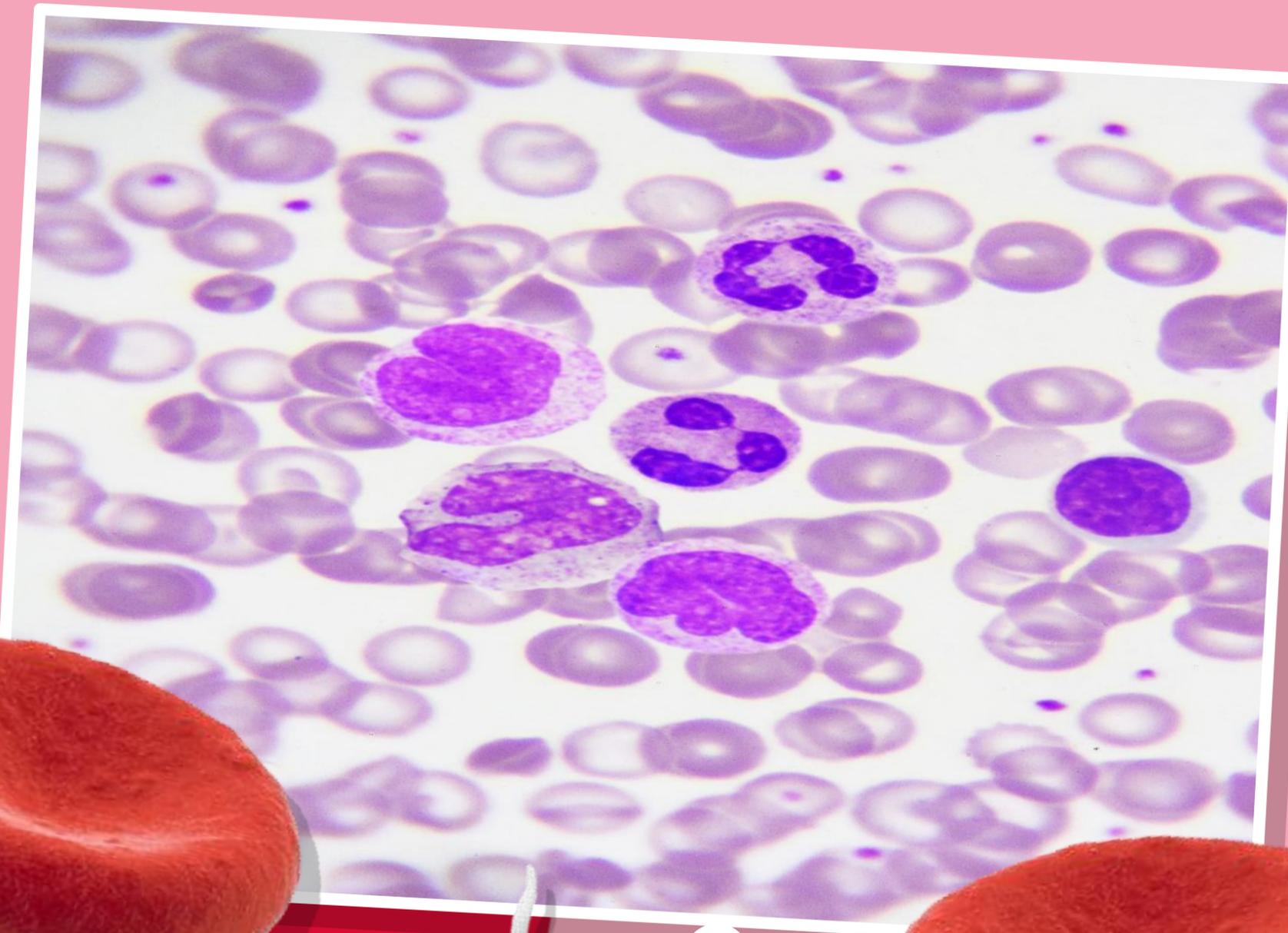
# Your recipe

Use the recipe to make an accurate representation of blood.

Think carefully about how much of each ingredient you will need.

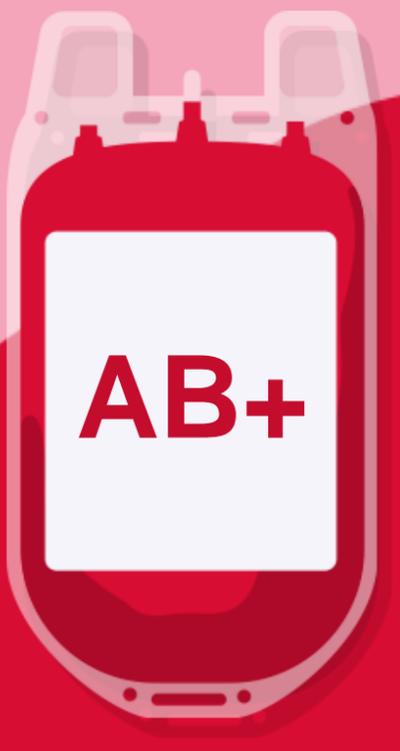
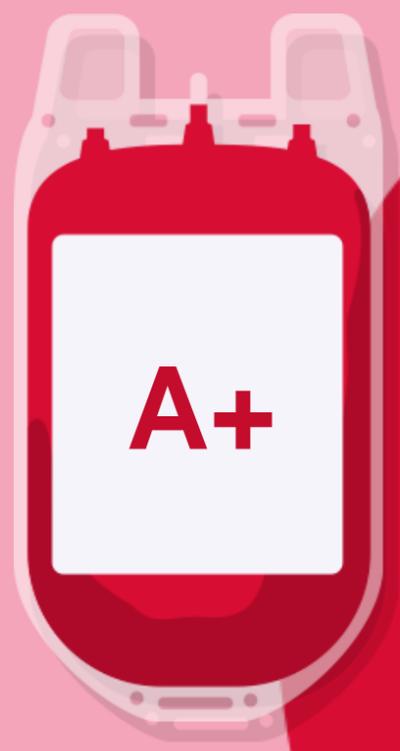
Blood cells	Ingredient	% of Blood
 <b>Plasma</b>		<b>54%</b>
<b>Red blood cells</b> 		<b>44%</b>
 <b>White blood cells</b>		<b>1.5%</b>
<b>Platelets</b> 		<b>0.5%</b>

# What happens if your blood doesn't have the right ingredients?



# Why do people give blood?





Who could you help?

