Teachers' notes

N.B. Teachers' notes and background information can only be viewed if this presentation is opened within the PowerPoint application, not on interactive whiteboards.

The visuals on the PowerPoint slides display best in PowerPoint presentation mode.

‘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

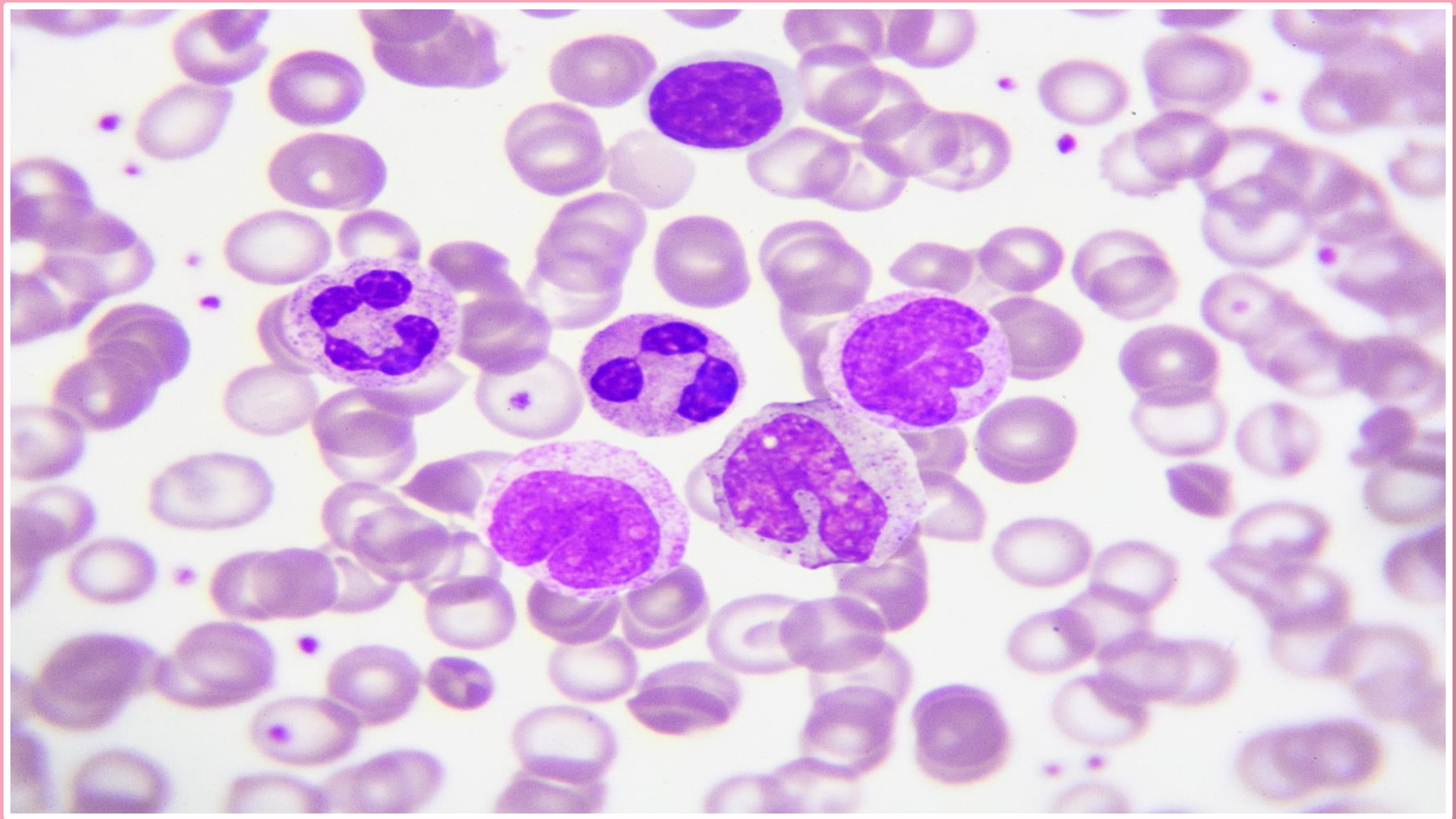
Learning aim

Can I describe the different components of blood and explain their impact on human health?

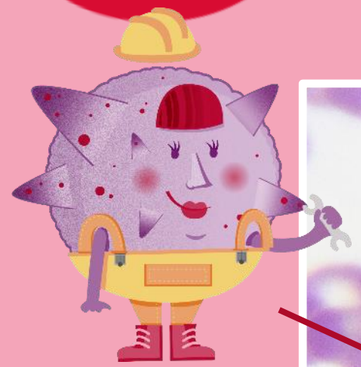
Success criteria:

- Identify the main components of blood and their different functions
- Describe the composition of blood using percentages
- Explain how changes in a person's blood can impact their health and wellbeing and how blood donation can help

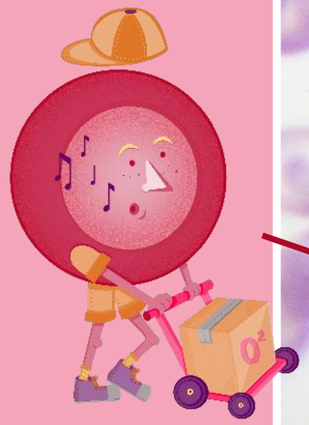
What can you see?



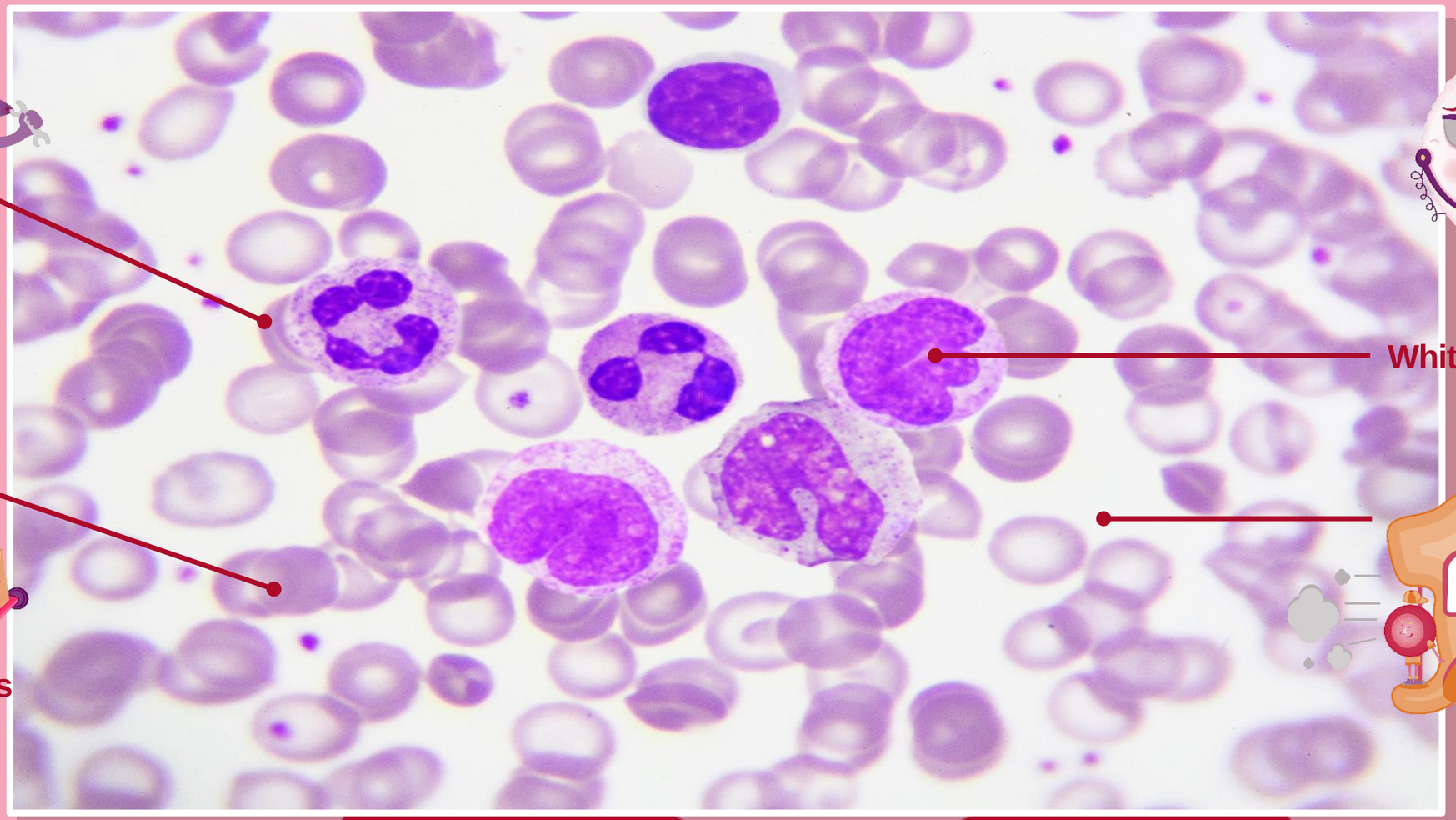
What’s blood made of?



Platelets



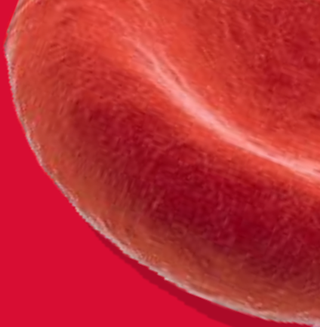
Red blood cells



White 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"

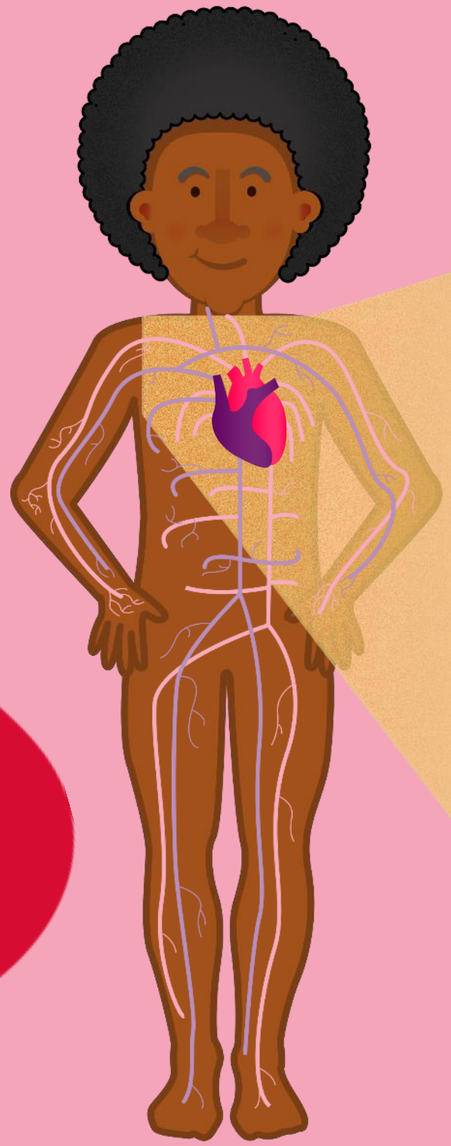
Platelets

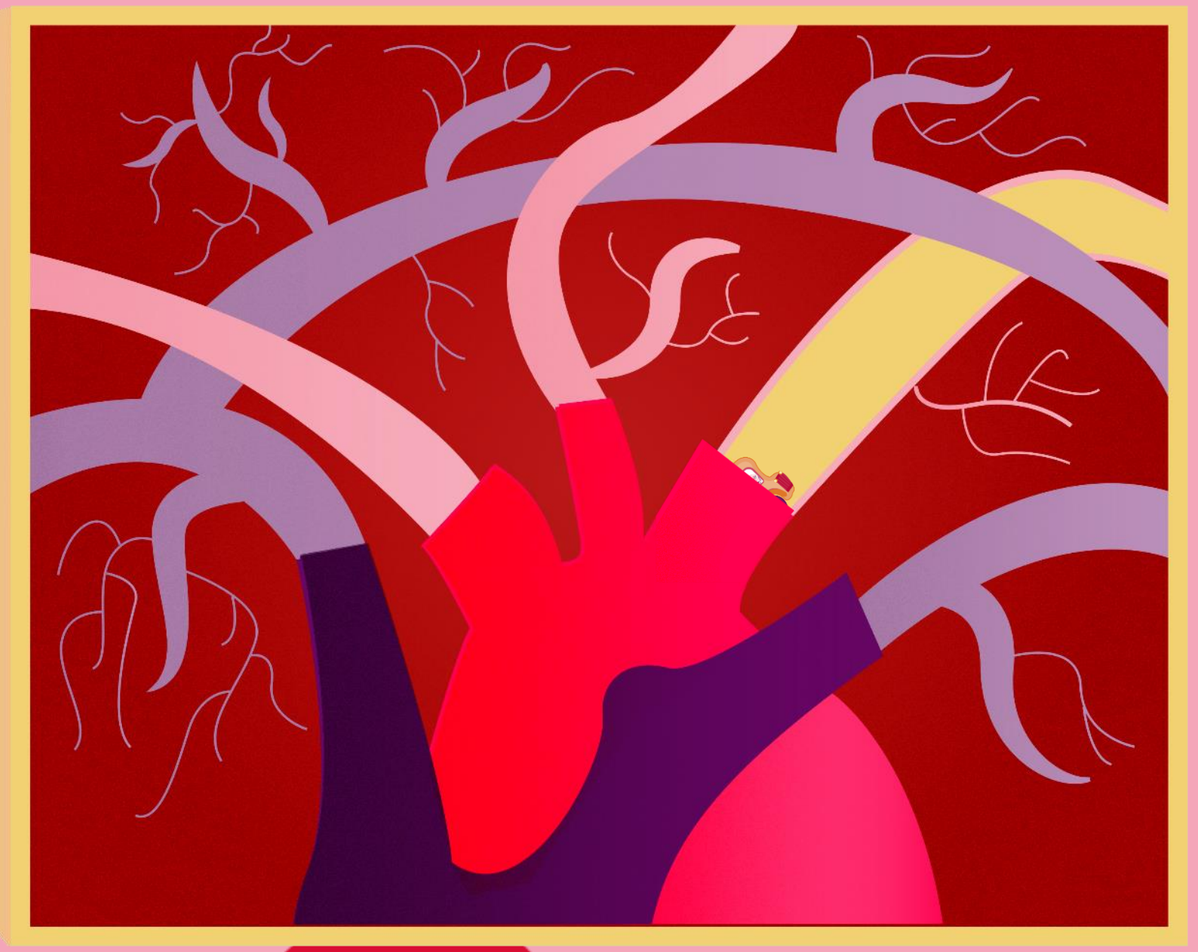
"I carry out repairs by clotting your blood"

Plasma

"…and I provide the transport"

How does blood travel?



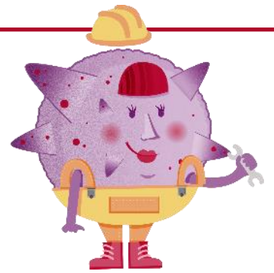


Finding your pulse

Can you calculate the quantities?

What you know:

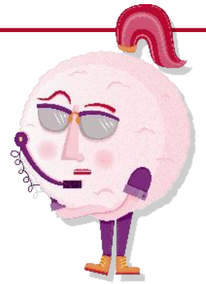
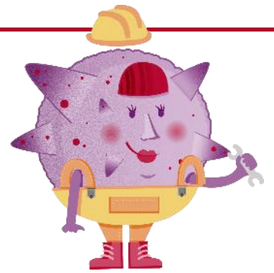
- White blood cells and platelets make up **2%** of a person's blood.
- The ratio of white blood cells *and* platelets to red blood cells is **1:22**.
- **1.5%** of a person's blood is made up of white blood cells.

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

Can you calculate the quantities?

What you know:

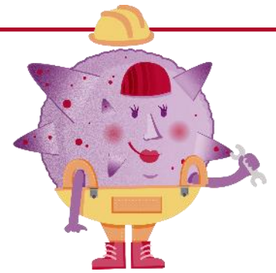
- A person's blood contains three times more white blood cells than platelets.
- The ratio of white blood cells *and* platelets to red blood cells is **1:22**.
- White blood cells and platelets make up **2%** of a person's blood.

Blood cells	Percentage of blood (%)
 Plasma	54%
Red blood Cells 	44%
 White blood cells	1.5%
Platelets 	0.5%

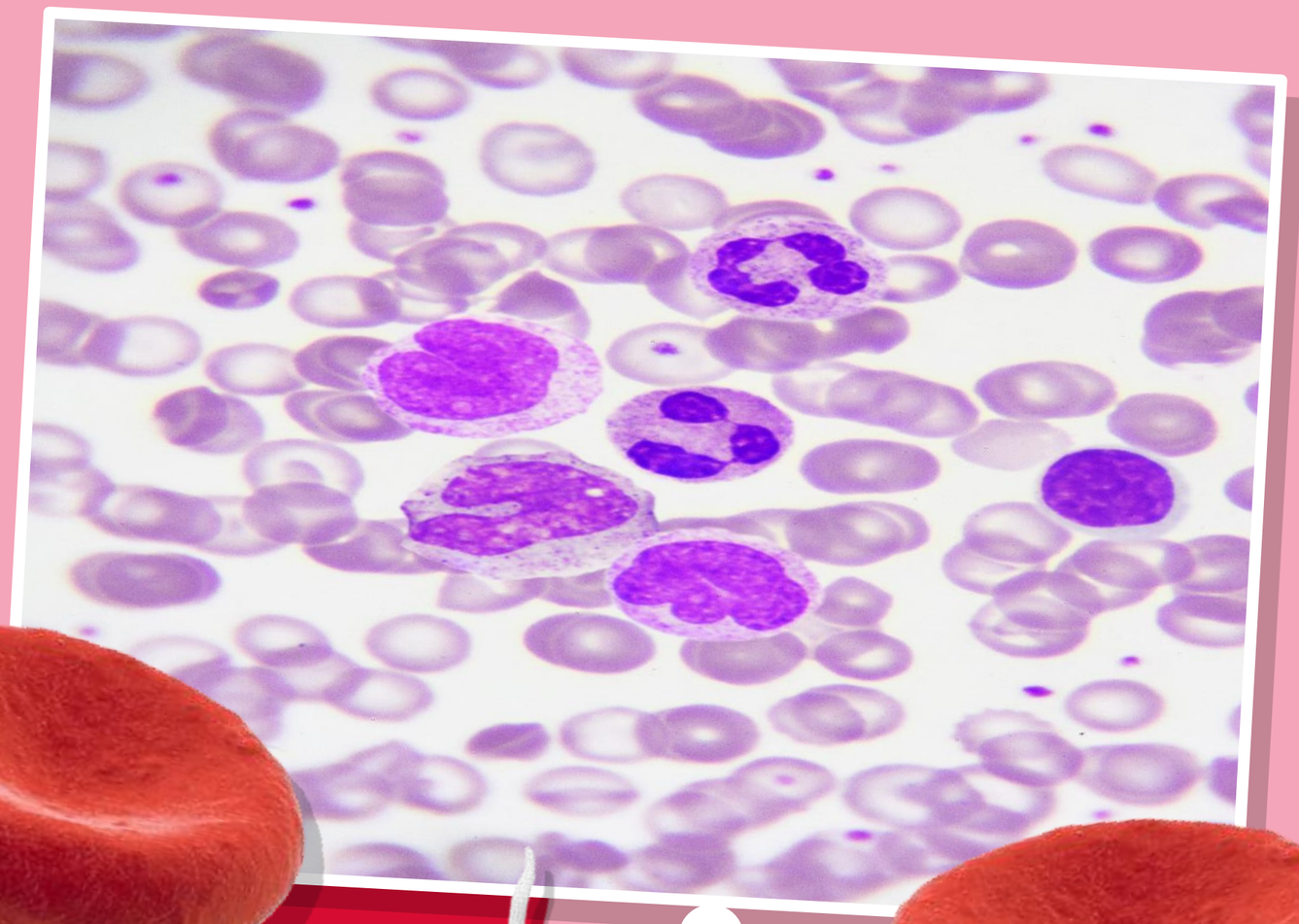
Your recipe

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
 Plasma		54%
Red blood cells 		44%
 White blood cells		1.5%
Platelets 		0.5%

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



Why do people give blood?

Who could you help?

‘Giving to help others’

Help spread the word!

See extension activities