# Blood components and plasma transport

Teacher / technician

YEAR 10 / LESSON 59 / BIOLOGY + SCIENCE (DOUBLE AWARD)

Staff preparation and answer guidance. Keep separate from student sheets. Original learning tasks; no supplied numerical example represents class measurements.

## Coverage and delivery

Shared Biology / Double Award: 2.59–2.60. Blood composition and plasma.

Allow about 60 minutes. Follow the student sequence and use the answers to check reasoning.

## Requisition • class of 30, working in 15 pairs

| Item | Per pair / setup | Class total |
|---|---|---|
| Student booklets | 1 per learner | 30 |
| Blood-component image/diagram sets / rulers | 1 set and 1 ruler per pair | 15 of each |

## Immediate safety

Paper, modelling and written reasoning only. No chemicals or biological samples are handled.

# Preparation and delivery

Read alongside the student method

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**1.** Provide 30 booklets and 15 labelled blood-smear image or diagram sets showing red cells, white cells and platelets. Use published images or clearly labelled drawings, never fresh blood.

**2.** Provide 15 rulers and keep answers separate until learners have attempted the tasks. Check that pupils distinguish plasma from the cells and fragments suspended in it.

## Close of lesson

• Return models and keep the corrected work.

## Check before teaching

Check the cards, reference data and quantities against this requisition. Keep the staff answer guide separate until the checking stage. Supplied numerical practice datasets are labelled examples; they are not class measurements.

# Answers and teaching notes

Expected explanations • do not give as experimental observations

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- Plasma.
- Red blood cells.
- No; they are cell fragments.
- For example glucose, amino acids, hormones, urea or hydrogencarbonate.
- The kidneys.
- No; it is transported mainly in dissolved chemical forms.

## References and provenance

Pearson Biology specification

Prepared 22 November 2026. Original wording, tables and questions. Sources inform the concepts and technique; the lesson scope and classroom quantities are explicitly described here. No laboratory trial or final school risk approval is claimed.