

The Circulatory System

Chapter 8: The Circulatory System · Topic 1

Key Concept

The heart has four chambers (two atria, two ventricles) and pumps blood through a double circulation system - pulmonary and systemic circuits.

Arteries carry oxygenated blood away from the heart (except the pulmonary artery), while veins carry blood towards the heart.

Blood consists of plasma, red blood cells (carrying oxygen via haemoglobin), white blood cells (immunity), and platelets (clotting).

The circulatory system also plays a role in regulating body temperature and distributing hormones throughout the body.

Quick Revision Notes

- Heart: 4 chambers (2 atria, 2 ventricles).
- Double circulation: pulmonary and systemic circuits.
- Arteries carry blood away from heart (usually oxygenated).
- Veins carry blood towards heart.
- Blood: plasma, RBCs, WBCs, platelets.
- RBCs carry oxygen via haemoglobin.
- WBCs provide immunity; platelets aid clotting.
- System also regulates temperature, distributes hormones.

Practice Questions

- 1 Diagram the four chambers of the heart.
- 2 Explain the difference between pulmonary and systemic circulation.
- 3 Discuss the functions of red and white blood cells.
- 4 Research how platelets help in clotting.
- 5 Explain why arteries have thicker walls than veins.
- 6 Explain the circulatory system in your own words.