

OCR Gateway Revision Guide: Your Ultimate Exam Prep Companion

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Functions of the Blood

Blood is very useful stuff. It's a big transport system for moving things around the body. The **blood cells** do good work too. The **red blood cells** are responsible for transporting **oxygen** about, and they carry 100 times more than could be moved just dissolved in the plasma. And as for the white blood cells...

Plasma is the Liquid Bit of Blood


It's basically blood minus the blood cells (see below). Plasma is a pale yellow liquid which **carries just about everything** that needs transporting around your body:

- 1) **Red and white blood cells** (see below) and **platelets (used in clotting)**.
- 2) **Water**.
- 3) Digested food products like **glucose** and **amino acids** from the gut to all the body cells.
- 4) **Carbon dioxide** from the body cells to the lungs.
- 5) **Urea** from the liver to the kidneys (where it's removed in the urine).
- 6) **Hormones** — these act like chemical messengers.
- 7) **Antibodies** and **antitoxins** produced by the white blood cells (see below).

Red Blood Cells Have the Job of Carrying Oxygen

They transport **oxygen** from the **lungs** to **all** the cells in the body. The **structure** of a red blood cell is adapted to its function:

- 1) Red blood cells are **small** and have a **biconcave shape** (which is a posh way of saying they look a little bit like doughnuts, see diagram below) to give a **large surface area** for **absorbing and releasing oxygen**.
- 2) They contain **haemoglobin**, which is what gives blood its **colour** — it contains a lot of **iron**. In the lungs, haemoglobin **reacts with oxygen** to become **oxyhaemoglobin**. In body tissues the reverse reaction happens to **release oxygen to the cells**.
- 3) Red blood cells don't have a **nucleus** — this frees up **space** for more haemoglobin, so they can carry more oxygen.
- 4) Red blood cells are very **flexible**. This means they can easily pass through the **tiny capillaries** (see next page).



White Blood Cells are Used to Fight Disease

- 1) Their main role is **defence against disease**.
- 2) They produce **antibodies** to fight microbes.
- 3) They produce **antitoxins** to neutralise the toxins produced by microbes.
- 4) They have a **flexible shape**, which helps them to **engulf** any micro-organisms they come across inside the body. Basically the white blood cell wraps around the micro-organism until it's **totally surrounded**, and then it **digests it** using enzymes.



It's all blood, sweat and tears — kind of... ...without the sweat... or the tears... just the blood then... yep... anyway...

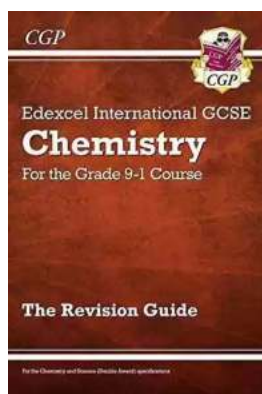
The average human body contains about **six and a half pints** of blood altogether, and every single drop contains **millions** of cells. There are usually about 500 times more red blood cells than white.

Module B3 — Living and Growing

Welcome to this comprehensive OCR Gateway Revision Guide, your essential companion to excel in your upcoming exams. Whether you are a student, a teacher, or a concerned parent, this guide will equip you with the necessary tools and knowledge to achieve your desired results.

Why is the OCR Gateway Revision Guide a Must-Have?

With the OCR Gateway Revision Guide, you can never go wrong in your preparation for the exams. Designed specifically for the OCR Gateway specifications, this guide is tailored to enhance your understanding, strengthen your knowledge, and boost your confidence. By incorporating a variety of learning techniques, it assists you in becoming thoroughly prepared, ensuring that you are well-equipped to tackle any question that may come your way.



Grade 9-1 GCSE Chemistry: OCR Gateway Revision Guide: ideal for catch-up and the 2022 and 2023 exams (CGP GCSE Chemistry 9-1 Revision) by CGP Books(Kindle Edition)

★★★★☆ 4.5 out of 5

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Key Features of the OCR Gateway Revision Guide

1. Comprehensive Notes: The OCR Gateway Revision Guide provides detailed and well-structured notes for each topic. Don't waste your time browsing through multiple textbooks or online resources. With this guide, you have everything you need in one place.

2. Exam-Style Questions: Testing your knowledge is essential to exam success. The OCR Gateway Revision Guide includes a wide range of exam-style

questions that closely resemble what you will encounter in the actual exams. This allows you to practice and familiarize yourself with the exam format, ensuring that you are fully prepared.

3. Model Answers and Marking Schemes: Additionally, the guide provides model answers and marking schemes for the exam-style questions. This not only helps you to gauge your performance but also enables you to understand the expectations of the examiner and improve your answers accordingly.

4. Revision Tips and Tricks: The OCR Gateway Revision Guide contains valuable revision tips and tricks that are aimed at enhancing your study process. Discover effective techniques to improve your understanding, manage your time efficiently, and reduce stress.

5. Illustrations and Diagrams: Visual aids play a significant role in knowledge retention. This guide incorporates a range of well-designed illustrations and diagrams, making complex concepts easier to understand and remember.

How to Make the Most of the OCR Gateway Revision Guide

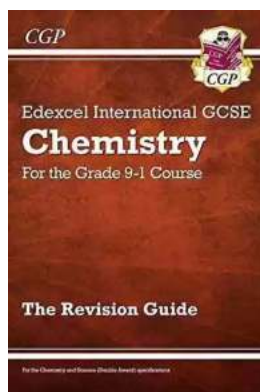
While the OCR Gateway Revision Guide provides a comprehensive resource for exam preparation, it is essential to utilize it effectively. Here are some tips to maximize your learning experience:

- **Start Early:** Begin your revision well in advance to allow sufficient time to cover all the topics thoroughly.
- **Create a Study Schedule:** Plan your study sessions to ensure a balanced approach and avoid last-minute cramming.
- **Take Frequent Breaks:** Allow yourself regular breaks during study sessions to avoid burnout and maintain focus.

- **Active Learning:** Engage with the material actively by taking notes, highlighting key points, and discussing topics with peers.
- **Practice Regularly:** Continuously test your knowledge through practice questions and consolidate your understanding.
- **Seek Help:** Don't hesitate to seek clarification from your teachers or classmates if you encounter difficulties with certain concepts.

The OCR Gateway Revision Guide is an indispensable tool for anyone aiming to excel in their OCR Gateway exams. Its comprehensive notes, exam-style questions, model answers, revision tips, and visual aids make it the ultimate exam prep companion. By utilizing this guide effectively and following the study tips provided, you will be well-equipped to achieve the results you desire.

So, why wait? Begin your journey towards exam success with the OCR Gateway Revision Guide today!



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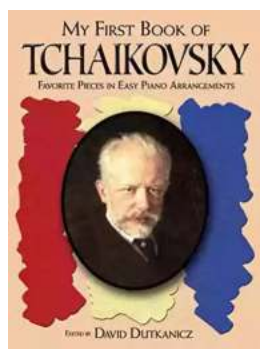


This fantastic CGP Revision Guide is perfectly matched to the Higher Level Grade 9-1 OCR Gateway GCSE Chemistry course. Every topic is explained with clear, succinct study notes, examples and diagrams - and there are practice questions at the end of every page to test you on what you've learned (with answers and mark schemes included). We've covered all the crucial elements of the Grade 9-1 course, including the required practicals, maths skills and Working Scientifically. And to make sure you're 100% prepared for the final exams, a matching Chemistry Exam Practice Workbook is also available from CGP - see 9781782945161.



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