YOUR JOURNEY

TO BECOMING EXAM READY

WELCOME TO GCSE COMPUTER SCIENCE

wjec cbac

By studying WJEC GCSE in Computer Science, it has been designed to give an understanding of the fundamental concepts of computer science and a broad scope of study opportunities. This specification has been designed to free centres to concentrate on innovative delivery of the course by having a streamlined, uncomplicated, futureproof structure, with realistic technological requirements.

PLANNING AHEAD...

WJEC GCSE in Computer Science encourages learners to:

- understand and apply the fundamental principles and concepts of computer science, including; abstraction, decomposition, logic, algorithms, and data representation
- analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs to do so
- think creatively, innovatively, analytically, logically and critically
- understand the components that make up digital systems, and how they communicate with one another and with other systems
- understand the impacts of digital technology to the individual and to wider society
- apply mathematical skills relevant to computer science.

This specification promotes the integrated study of computer science. It will enable learners to develop a broad range of skills in the areas of programming, system development, computer architecture, data, communication and applications.
The knowledge, understanding and skills are set out in the two columns in the pages that follow. The topic to be studied is in the first column, with the amplification in the second column. There is no hierarchy implied by the order in which content and amplification are presented, nor should the length of the various sections be taken to imply any view of their relative importance.

The subject content for GCSE Computer Science will be assessed across three units. Whist there is a degree of overlap between the content in Unit 1 and Unit 2, the context in which this content is assessed differs. In Unit 1, content is assessed in a theoretical way, whereas in Unit 2 it is assessed through its use within programs and algorithms.

Unit 1
This unit investigates hardware, logical operations, communication, data representation and data types, operating systems, principles of programming, software engineering, program construction, security and data management and the impacts of digital technology on wider society.

Unit 2
This unit investigates problem solving, algorithms and programming constructs, programming languages, data structures and data types and security and authentication.

Unit 3
This unit requires learners to produce a programmed solution to a problem. They must analyse the problem, design a solution to the problem, develop a final programmed solution, test the solution and give suggestions for further development of the solution. Throughout the production of the solution learners are required to produce a refinement log that evidences the development of the solution.

GIVE IT YOUR ALL!

TOP TIPS

Download the free online resources on the WJEC website

Familiarise yourself with Algorithms, programming constructs, programming languages

Make use of the sample assessment materials (SAMs) as well as the past papers and mark schemes to familiarise yourselves with the structures of the papers

Use the Online Exam Review link on the WJEC website to view examples of candidate responses to past questions, the mark awarded and the corresponding examiner comments

WELLBEING GUIDANCE

Take baby steps.
Remember this is a journey and you will pick skills and knowledge up along the way.

Take regular breaks from studying.
Exercise, meet friends, spend time with family.

Look after yourself.
Make sure you are getting a balanced diet and get enough sleep.

Try to stay positive.
Even if you don't feel like it, a positive attitude will help you.

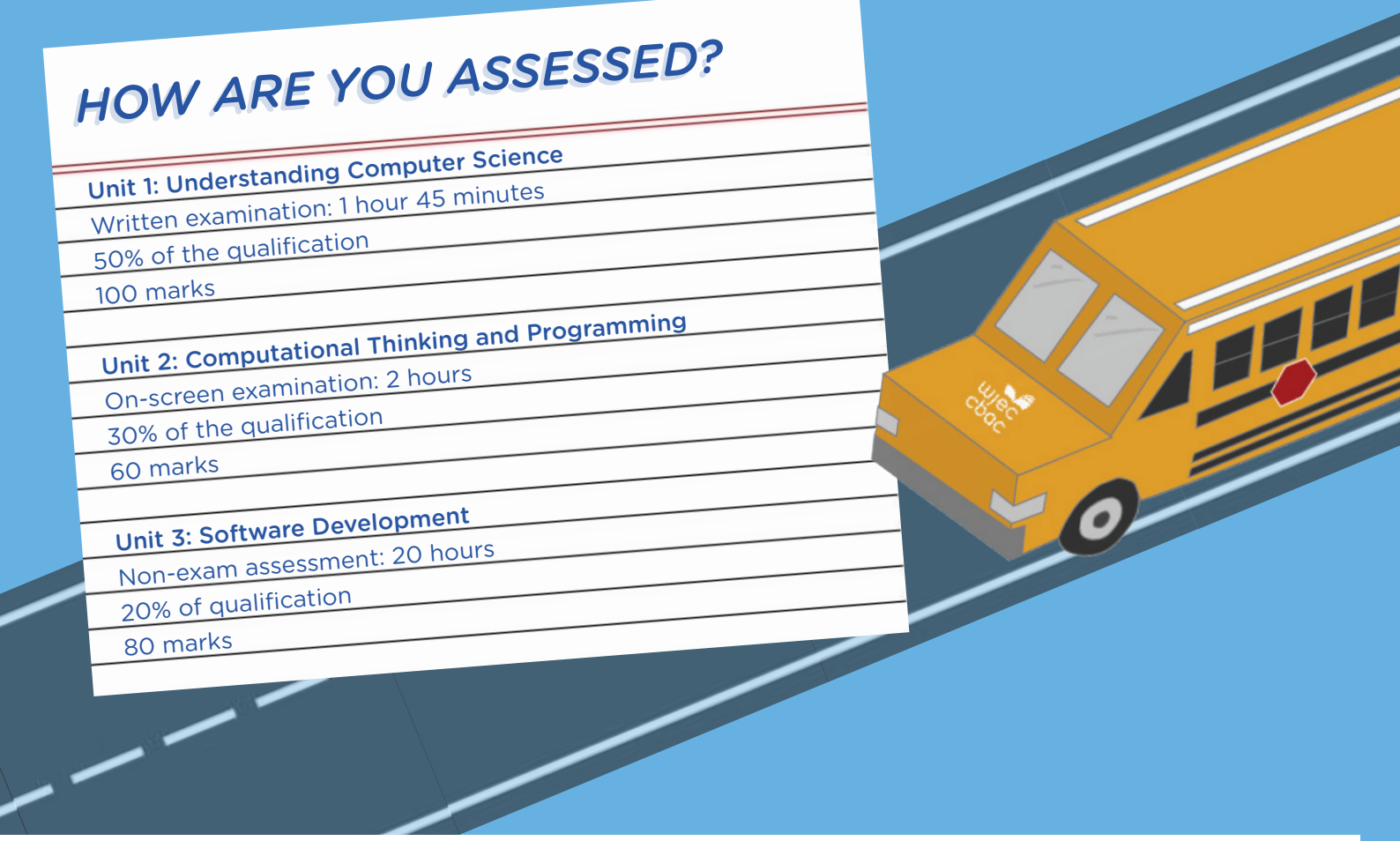
Remember that everyone's different.
Try not to compare yourself to others.

HOW ARE YOU ASSESSED?

Unit 1: Understanding Computer Science
Written examination: 1 hour 45 minutes
50% of the qualification
100 marks

Unit 2: Computational Thinking and Programming
On-screen examination: 2 hours
30% of the qualification
60 marks

Unit 3: Software Development
Non-exam assessment: 20 hours
20% of qualification
80 marks



Find out more at **www.wjec.co.uk/qualifications/computer-science-gcse**