

A Level Computer Science

Part A - Bridging Work Task

This is a fantastic opportunity to expand your understanding of A Level Computer Science as you prepare for enrolment and start at Franklin in September.

Please complete the work and bring a copy to your enrolment, either printed or electronically.

The work will take you around **2 hours** so plan your time to best suit you.

How do I complete and submit my task?	Complete the tasks on paper/handwritten or digitally, and bring a copy, either paper or electronically, to your enrolment appointment. Also, bring this along to your first lesson in September. If you didn't attend the Taster Day, don't worry. It isn't essential for completing this work, but please ensure that you have completed this bridging work.
Introduction to your Bridging Task	This task will give you an introduction to the first topics you can expect to study in September. In preparation for A Level Computer Science at Franklin the following tasks will immerse you in the subject of Computer Science and develop a set of skills needed to achieve success in this subject. Computers use binary - the digits 0 and 1 - to store data. All computer data is represented using binary.
Task details	Follow this online course that was created by our department. bit.ly/3JtW9la The course is set up so that each topic contains an overview and some examples followed by a practice section. There is a final quiz at the end. Your submission should show evidence that you have completed each of the sections below: • Binary Conversion Practice • Hexadecimal Conversion Practice • Binary Addition Practice • Binary numbers with a fractional part Practice.

	You should then complete the final quiz. Your completed work should include the practice questions from each section in addition to evidence of your final quiz score.
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Resources to help you with the Bridging Task	In addition to the practice questions each section contains some videos to watch followed by some walk-through examples.
Extension Tasks	
Extension Tasks to stretch and challenge you	If you have completed the above to the best of your ability, feel free to try this extension task (<i>this is optional</i>). If you want to look into binary numbers with more depth. You can look at how to represent negative numbers here: https://bit.ly/3yOwbKw You will need to create a free account.
Massive Open Online Courses (MOOCs)	You might enrol on this online course and complete the following to push you a little further (this is optional): https://bit.ly/3pffd67

A Level Computer Science

Part B – Preparing for Studying at Franklin

A fantastic opportunity to widen your understanding of the course.

Examining Board and Specification	The Exam board for A Level Computer Science is OCR. You can view the specification at the following link: https://www.ocr.org.uk/Images/170844-specification-accredited-a-level-gce-computer-science-h446.pdf You can find a full breakdown of all topics here: https://craigndave.org/ocr-a-level-h046-h446-videos/
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	Progression after this course: This qualification will allow you to progress to a wide range of degrees and opportunities in the Subject area of computer science including, Software development, Web Development, Cyber Security, Robotics & AI. The skills developed on the course will also support progression into degrees in the wider field of STEM. There are many different career fields that students go into after studying <table border="1" data-bbox="430 589 1433 806"> <tr> <td data-bbox="430 589 932 806"> • Artificial Intelligence (AI) • Web development • Data management • Statistics • Business analysis </td><td data-bbox="932 589 1433 806"> • Cybersecurity • Software development • Engineering • Architecture • Information security </td></tr> </table>	• Artificial Intelligence (AI) • Web development • Data management • Statistics • Business analysis	• Cybersecurity • Software development • Engineering • Architecture • Information security
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Preparing for the course	Here are some helpful sources of information if you would like further information about the subject: Whilst GCSE Computer Science is not required you may want to look over some of the content as lots of the topics are shared, with complexity added in A Level. https://bbc.in/3ywCbHG If you did study Computer Science at GCSE, you may find it useful to look over the specification and topic links above to identify the common areas. Craig and Dave provide a full range of videos that cover the full specification. https://craigndave.org/ocr-a-level-h046-h446-videos/ Isaacs Computer Science is a free online resource that gives you access to a huge range of online learning materials for the classroom, homework, and revision. https://isaacomputerscience.org/		