



Subject	Year	Term
Computer Science	12	3
Topic		
Programming, exchanging data, coursework		
Content (Intent)		
Prior Learning (Topic)	Programming, system software, Computational thinking, software development	
Programming. The use of an IDE to develop/debug a program, and the fundamentals of programming including recursion and the concepts of OOP, while recognising that some students may have had little previous experience of programming and others will already be seasoned programmers.		
Exchanging data. compression and encryption, databases and SQL, transaction processing.		
Program development for component 3 of the A level, including analysis, design, implementation and evaluation.		
Future Learning (Topic)	Network, coursework	
What Knowledge and Skills will be taught (Implementation)	How will your understanding be assessed & recorded (Impact)	
Start of the coursework project, analysis, design, implementation and evaluation	Drafts of analysis, design and development of software to be handed in and marked. On going intervention and marking of coursework as it arises. Year 12 mock exam	
E-R diagrams, SQL to select, insert, edit, delete records. Normalisation through first, and second normal form to third normal form. How each part of ACID works in transactional databases, Referential integrity.	Worksheets and homework sheets sourced form PG-online, in the style of exam questions. End of unit assessment. Regular assessment to test previous learning through the use of past papers	
How can parents help at home?		
Ensure students do the homework, prepare for mock exams. Ensure students have Python and VS Code at home so they can do coursework at home. Ensure access to the internet so that they can use stack overflow and other forums that help solve problems.		
Helpful further reading/discussion (including Reading and Vocabulary Lists)		
Reading	Vocabulary Lists	
Course textbook ISBN 978-1910523056	Top Down	Ensure
OCR AS and A Level Computer Science, by Heathcote and Heathcote	Display	Featuring
www.stackoverflow.com	Enable	Format
PG-online unit resources 5 and 11	Procedural	Object
	Class	SQL
		ACID
		Transaction
		Concurrency