

SUBJECT		YEAR	TERM
A-Level Computer Science (OCR)		12	2
UNIT			
Databases			
INTENT			
PRIOR LEARNING (TOPIC) – GCSE SQL			
The whole world revolves around the use of databases. However, there are very few people who really understand how they work! This unit introduces the concept of database design and how SQL can be used to build and use them. This unit is vital not only for a very wide range of careers, but often for success in the coursework, in which persistent storage of data is very common.			Specification Points: This unit covers point 1.3.2
FUTURE LEARNING (TOPIC): Programming Project			
IMPLEMENTATION		IMPACT	
Throughout the unit pupils will cover: <ul style="list-style-type: none">• Core fundamentals of database design, such as keys, fields and records.• The differences between flat-file and relational databases, including types of relationship and referential integrity.• How to resolve relationship issues in database design.• How to normalise a database up to 3NF.• How to use SQL to modify and interpret a database.• The use of ACID to aid in transaction management.		Assessment: Pupils will sit a 40 mark in-lesson assessment at the end of the unit, the score from which will be translated into an A* to E style grading. In addition to this, pupils will complete regular exam style questions both during lesson and as part of homework tasks.	
HOW CAN PARENTS HELP AT HOME?			
All course materials are available via Firefly. In the build-up to the assessment, parents can help by supporting their child’s revision. This can include testing them using flash cards or simply getting them to explain topics to you.			
HELPFUL READING/FURTHER DISCUSSION			
READING/EXTRA-LEARNING There are an enormous number of online courses and tutorials to help pupils develop their computer science skills further. Visit the Next Steps section of the Computing department’s Firefly page for more details.	CAREERS The skills / knowledge learnt in this unit lead perfectly into a wide range of careers including web development and database administrator.		WIDER SKILLS Digital Literacy Problem Solving Resilience
VOCABULARY Field, Record, Entity, Table, Primary Key, Secondary Key, Foreign Key, Relationship, Referential Integrity, ACID, SQL, Select, Join, Wildcards, Delete, Drop, Insert, JSON, XML.			