/Computing@Balcarras_

SUBJECT	YEAR	TERM
Computer Science (OCR)	**11**	**1**

UNIT

Advanced Programming

INTENT

PRIOR LEARNING (TOPIC) – Programming Fundamentals

Once pupils have got a secure understanding of the fundamentals of programming, we can move onto looking at some more advanced techniques.

This includes the use of sub-programs, handling external files, the use of simple data structures and accessing databases using SQL.

Specification Points:
This unit covers point 2.2.3

FUTURE LEARNING (TOPIC): Software Development

IMPLEMENTATION

Throughout the unit pupils will cover:

- How to handle external files.
- How to use both 1D and 2D arrays.
- How to use SQL to search for data in a database.
- How to use a modular approach to programming.
- The use of external libraries, such as random.

IMPACT

Assessment: Pupils will sit a 40 mark in-lesson assessment at the end of the unit, the score from which will be translated into a 9-1 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 programming skills learnt in this unit lead perfectly into a wide range of careers including software developer.

WIDER SKILLS
Digital Literacy
Numeracy
Problem Solving
Resilience

VOCABULARY
Open, Read, Write, Close, SQL, Select, *, Array, Procedure, Function, Return, Random.