/Computing@Balcarras_

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

UNIT

Software Development

INTENT

PRIOR LEARNING (TOPIC) – Advanced Programming

This unit has both practical and theoretical aspects to it. From a practical point of view pupils learn techniques they can use to make their programs more robust. This includes a range of validation types and good practice to improve the maintainability of code. The more theoretical side of the topic covers aspects like types of programming language and how high-level languages, such as Python are translated into low level machine code.

Specification Points: This unit covers points 2.3.1 to 2.3.2

FUTURE LEARNING (TOPIC): A-Level Computer Science

IMPLEMENTATION

Throughout the unit pupils will cover:

- Using validation techniques such as range, format, type and length checks.
- How to make code as maintainable as possible.
- How to test programs effectively.
- Methods used to identify and solve errors.
- Features of IDEs and how these help programmers write code.

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
Problem Solving
Resilience

VOCABULARY

Authentication, Validation, Maintainability, Iterative Testing, Terminal Testing, Syntax, Logic, Test Data, IDE