

# LEARNING JOURNEY GCSE Computer Science

## YEAR 10 – Computer Science: TERM 1

### J277/02 – PROGRAMMING



**PRIOR LEARNING** (from Key Stage 3):

	TERM 1	TERM 2	TERM 3
YEAR 7	<b>MY DIGITAL WORLD</b> Be SMART online and using ICT Software Mastery: Microsoft Suite	<b>AUDIENCE AND PURPOSE</b> Create products that have impact Software Mastery: PowerPoint	<b>UNDERSTANDING COMPUTERS</b> How computers work Software Mastery: Scratch
YEAR 8	<b>DIGITAL MEDIA</b> Being creative in a digital world Software Mastery: Photoshop	<b>CYBER SECURITY</b> Living in the modern world Software Mastery: PowerPoint	<b>PYTHON BASICS</b> Begin to programme Software Mastery: Python
YEAR 9	<b>CREATIVE DESIGN</b> Creative iMedia taster Software Mastery: Photoshop	<b>ADVANCED PYTHON</b> Computer Science taster Software Mastery: Python	<b>CREATE A VIDEO</b> Research developing technology Software Mastery: Premier Elements

### Aim of the Unit

In this unit students will learn how to develop an understanding of programming. Students will learn how to create programs using python. Students will also learn how to develop program constructs and skills in using loops, lists, reading and writing to files.

### Topics to be covered:

- Sequence and Selection
- Iteration
- Arrays
- Procedures and functions
- Records and files

### Assessment Procedure

The topics covered in this unit, will help prepare students for some of the theory needed for Paper 2. This will be examined at the end of Year 11 and is worth 50% of the final mark for the course. During the lessons, students will undertake informal MCQ (multiple choice questions) to diagnose misconceptions. They will then undertake an end of unit assessment. The assessment will be out of 50 marks.

### Homework

Homework will be set at least once a week. Seneca assignments will be assigned to help with knowledge retrieval in the run up to assessments. Details of individual homework can be found on Synergy.

### How can you help?

Encourage your child to attend sessions with their teacher after school to improve their understanding. They should also review their theory regularly at home, as well as complete homework's thoroughly as they are all from past exam papers. Support is also available through explainer videos contained on the class team's page.

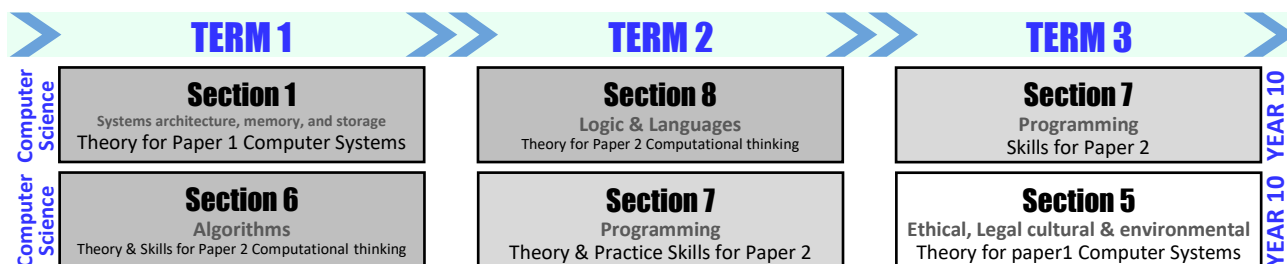


Unit 7 – PROGRAMMING (Knowledge & Skills)				
<b>7.1 Programming fundamentals</b>	Date:	😊	😐	😞
Variables   Identifier   Data type   Integer   Real/Float   Char/Character   String   Boolean   Assignment   Constants   Input   Output   Arithmetic Operators   Comparison operators   MOD   DIV   Casting   Concatenation   String Manipulation   ASC /Ord - CHR				
<b>7.2 Sequence and Selection</b>	Date:	😊	😐	😞
Sequence   Selection   Logical operators   NOT   OR   AND   Boolean Expressions				
<b>7.3 Iteration</b>	Date:	😊	😐	😞
FOR   While   End While   Do ...Until   Nested Loops				
<b>7.4 Arrays</b>	Date:	😊	😐	😞
Array   1 -dimensional   Index Subscript   Assign   2 – dimensional				
<b>7.5 Procedures and functions</b>	Date:	😊	😐	😞
Procedure   Function   Parameters   randint   Local variables   Global variables   Subroutines   Decomposing   Tested subroutine library   Maintenance				
<b>7.6 Records and Files</b>	Date:	😊	😐	😞
Data structure   File   SQL   Comma- separated value				

## Revision, Test and Closing the Gap for topics covered so far

<b>TEST RESULT:</b>	<b>Target Grade:</b>
<b>Mark:</b>	<b>Percentage:</b>
<b>Grade:</b>	<b>On target?</b>

## FUTURE LEARNING:



Ad Astra

S
T
A
R
S

★ SINCERE ★ THOUGHTFUL ★ ASPIRATIONAL ★ RESILIENT ★ SOLIDARITY ★