

## OCR GCSE COMPUTER SCIENCE J277 : YEAR 10

<b>Comp 01: Computer Systems</b>	This is assessed by a written paper, which has a mixture of short and long answer questions. 15% AO1, 22% AO2 and 3% AO3. No calculators allowed. <i>Written paper, 1 hour 30 mins, 80 marks, 50% of qualification.</i>
<b>Comp 02: Computational Thinking, Algorithms and Programming</b>	This is assessed by a written paper, with 2 sections: Section A Algorithm a mixture of short and long answer questions and Section B: Practical Programming 14% AO1, 14% AO2 and 12% AO3. No calculators allowed. <i>Written paper, 1 hour 30 mins, 80 marks, 50% of qualification.</i>
<b>Practical Programming Skills</b>	The programming task(s) must allow them to develop skills within the following areas when programming: Design, Write, Test, Refine

Week	WC	Theory		Programming	
		Topic Focus	Lesson Focus	Topic Focus	Lesson Focus
2	07/09/2020	Intro & Expectations	Course Overview & Computational Thinking	2.2 Programming Techniques	Variables, Constants, Input & Output
3	14/09/2020		Revision	2.2 Programming Techniques	Data Types & Operators
4	21/09/2020	Exam Assessment 1	Assessment on Year 9 Content	2.2 Programming Techniques	Sequencing
5	28/09/2020	Think Pink Go Green	Think Pink Go Green	2.2 Programming Techniques	Iteration (Fixed and Conditional)
6	05/10/2020	2.1 Algorithms	Standard searching algorithms (Linear)	2.2 Programming Techniques	Iteration (Fixed and Conditional)
7	12/10/2020	2.1 Algorithms	Standard searching algorithms (Binary)	2.2 Programming Techniques	Iteration (Fixed and Conditional)
	19/10/2020	Half Term			
	26/10/2020	Half Term			
1	02/11/2020	2.1 Algorithms	Standard sorting algorithms (Bubble)	2.1 Algorithms	Pseudocode- Basic String Manipulation
2	09/11/2020	2.1 Algorithms	Standard sorting algorithms (Insertion)	2.1 Algorithms	Pseudocode -variables, constants, operators, inputs, outputs and assignments
3	16/11/2020	2.1 Algorithms	Standard sorting algorithms (Merge & Comparisons)	2.1 Algorithms	Pseudocode -Selection
4	23/11/2020	2.5 Translators and facilities of languages	Characteristics of different levels of programming language	2.1 Algorithms	Pseudocode --Loops-For, While
5	30/11/2020	2.5 Translators and facilities of languages	Translators and characteristics of types of translators	2.1 Algorithms	Pseudocode -Arrays
6	07/12/2020	Exam Assessment 2	Cumulative Written Assessment	2.1 Algorithms	Pseudocode -Functions, Subprogram, Subprocedure
7	14/12/2020	Think Pink Go Green	Think Pink Go Green	2.1 Algorithms	Pseudocode -File handling
	21/12/2020	Christmas Holiday			
	28/12/2020	Christmas Holiday			
1	04/01/2021	2.5 Translators and facilities of languages	IDE common tools and facilities	2.2 Programming Techniques	File Handling
2	11/01/2021	2.5 Translators and facilities of languages	Syntax and Logic Errors	2.2 Programming Techniques	File Handling
3	18/01/2021	2.5 Translators and facilities of languages	Purpose and types of testing & test data	2.2 Programming Techniques	File Handling
4	25/01/2021	Assessment	Class Assignment 3	2.2 Programming Techniques	File Handling
5	01/02/2021	Think Pink Go Green	Think Pink Go Green	2.2 Programming Techniques	SQL
6	08/02/2021	1.2 Data Representation - Units / Numbers	Measurement of data, conversion of Denary/Binary/Hex	2.2 Programming Techniques	SQL
	15/02/2021	Half Term			

25	22/02/2021	1.2 Data Representation - Numbers	Binary addition, Overflow, Binary Shifts, Check Digits	2.3 Producing Robust Programs	Defensive design: input sanitisation/validation, planning for contingencies, anticipating misuse and
26	01/03/2021	1.2 Data Representation - Text	Character sets, limitations, types (ASCII) conversion.	2.3 Producing Robust Programs	Maintainability. Comments, indentation, layout, variable names
27	08/03/2021	1.2 Data Representation - Images	Bitmap images, resolution (Quality), colour depth.	2.3 Producing Robust Programs	Purpose of Testing, Test plan
28	15/03/2021	Exam Assessment 3	Cumulative Written Assessment	2.3 Producing Robust Programs	2.3 Iterative testing: Normal, extreme and invalid test data
29	22/03/2021	Think Pink Go Green	Think Pink Go Green	2.3 Producing Robust Programs	2.3 Syntax and logic errors
30	29/03/2021	Data Representation - Sound	Analogue to digital, sample rate, etc.	Assessment	Cumulative Written Assessment
31	05/04/2021	Easter			
32	12/04/2021				
33	19/04/2021	Data Representation - Compression	Lossy vs Lossless, types, file extensions.	Programming Development	Practise & Consolidation
34	26/04/2021	1.8 Ethical, legal, cultural and environmental Issues	Legal Issues & relevant laws (open vs proprietary software)	Programming Development	Practise & Consolidation
35	03/05/2021	1.8 Ethical, legal, cultural and environmental Issues	Environmental Issues	Programming Development	Practise & Consolidation
36	10/05/2021	1.8 Ethical, legal, cultural and environmental Issues	Ethical & Cultural Issues	Programming Development	Practise & Consolidation
37	17/05/2021	1.8 Ethical, legal, cultural and environmental Issues	Key stakeholder considerations	Class Assessment 5	Flashback Assessment
38	24/05/2021	Half Term			
39	31/05/2021	Programming Development	Practise & Consolidation	Programming Development	Practise & Consolidation
40	07/06/2021	Programming Development	Practise & Consolidation	Programming Development	Practise & Consolidation
41	14/06/2021	Programming Development	Practise & Consolidation	Programming Development	Practise & Consolidation
42	21/06/2021	EOY Assessment	End of Year Assessment both papers Comp1& Comp2	Programming Development	Practise & Consolidation
43	28/06/2021	Revision	Revision for Comp 01	Revision	Revision for Comp 02
44	05/07/2021	Comp 01 Mock	Comp 01 Mock	.....	Comp 02 Mock
45	12/07/2021				

Assessment Objectives	
<b>A01</b>	<b>Demonstrate knowledge and understanding of the key concepts and principles of Computer Science</b>
<b>A02</b>	<b>Apply knowledge and understanding of key concepts and principles of Computer Science</b>
<b>A03</b>	<b>Analyse problems in computational terms:</b> - to make reasoned judgements - to design, program, evaluate and refine solutions