

Year 11 – GCSE (9-1) Computer Science - Learning Journey 2019-2020

Week	Date	Topic and assessment objectives Key constructs that we cover	What we will learn about each week	Assessment
1	07.09.20	20 Hour Practical Programming Project Set by OCR Exam Board 8 weeks 3 x 50 min +1 extra week in case of lost lesson time from other school activities e.g. Development Day A01 A02 A03	Analysis of a given problem to consider what it involves. Listing the requirements and success criteria for new system. Considering data, structures and files that new system will need. Designing the workings of new system using algorithms or flowcharts. Planning how to test the new system, including appropriate test data and anticipating results/outcomes. Implementing the new system – writing code and ongoing testing. Final testing and evaluating the extent to which the new system works.	Project report submitted to teacher as single PDF.
2	14.09.20			
3	21.09.20			
4	28.09.20			
5	05.10.20			
6	12.10.20			
7	19.10.20			
Half-Term				
8	02.11.20	Finish and hand in project report	As above.	As above.
9	09.11.20	Preparation for Mock Exam		
10	16.11.20	Mock Exams		
11	23.11.20	Mock Exams		
12	30.11.20	1.7 Systems Software A01 A02	Purpose and functionality of Operating Systems Types of interfaces Management of resources System utilities	Unit Test 1.7
13	07.12.20	1.6 System Security A01 A02	Forms of attack and threats to networks Identifying and preventing vulnerabilities	Unit Test 1.6
14	14.12.20	RAP of topics 1.7, 1.8 and mock exam		
Christmas				
15	04.01.21	2.4 Computational Logic A01 A02 A03	Binary and Hexadecimal recap, Arithmetic Operations + - * / ^ MOD DIV Logical Operations and Expressions AND OR NOT	Unit Test 2.4
16	11.01.21			
17	18.01.21	2.6b Data Representation A01 A02	Numbers, Adding, Overflow, Shifting, Recap of characters / character sets Images, Audio, Compression	Unit Test 2.6b
18	25.01.21			
19	01.02.21			
20	08.02.21			
Half Term				
21	22.02.21	2.5 Translators and Facilities of Languages A01 A02	Characteristics and purpose of high-level and low-level languages. Translators: compilers, interpreters and assemblers. Commons tools and features of Integrated Development Environments: text-editors, error diagnostics, run-time environment, translator.	Unit Test 2.5
22	01.03.21	2.3 Producing Robust Programs A01 A02 A03	Defensive design and maintainable code. Types of error. Types of testing.	Unit Test 2.3
23	08.03.21			
24	15.03.21			
25	22.03.21	1.8 Ethical, Legal, Cultural and Environmental Considerations A01 A02	Morals and Ethics. Laws that affect our use of technology, including Computer Misuse Act, Data Protection Act, GDPR, Copyright, Creative Commons Licensing.	Unit Test 1.8
26 (½ wk)	29.03.21		Effect of technology on the environment. Effect on different cultures.	
Easter				
27	19.04.21	REVISION, PRACTICE QUESTIONS AND EXAM TECHNIQUE A01 A02 A03	Recap of all topics. Mixed questions from both exam papers.	
28	26.04.21			
29	04.05.21			
30	10.05.21			
31	17.05.21	FINAL EXAMINATION PAPERS 1 AND 2	Paper 1: Computer Systems - Mon 11 th June AM – 1.5 hours Paper 2: Computational thinking, algorithms & programming - Thurs 14 th June PM – 1.5 hours	

What do the Assessment Objectives mean?

- A01** Demonstrate knowledge and understanding of the key concepts and principles of Computer Science.
- A02** Apply knowledge and understanding of key concepts and principles.
- A03** Analyse problems in computational terms / make reasoned judgments / design, program, evaluate, refine solutions.

Year 11 – GCSE (9-1) Computer Science - Progress Tracker

FLIGHT PATH STICKER	<p style="text-align: center;">Overview of exam Breakdown of exams, length and weighting</p> <p>Non-Examined Assessment Programming Project 20 hours at the start of Year 11 – worth 0%</p> <p>Computer Systems Exam Paper 1 (J276/01) 1.5 hours at the end of Year 11 – worth 50%</p> <p>Computational thinking, algorithms and programming Exam Paper 2 (J276/02) 1.5 hours at the end of Year 11 – worth 50%</p>
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Date	Assessment End of Unit Test	Flightpath Grade	Action (s) to make progress
	1.6 System Security		
	1.7 Systems Software		
	MOCK EXAM		
	2.4 Computational Logic		
	2.6b Data Representation		
	2.5 Translators and Facilities of Languages		
	2.3 Producing Robust Programs		
	1.8 Ethical, Legal, Cultural and Environmental Considerations		