

St John's Senior School



Subject: Computer Science
Teacher: Mr Zampekos

Form: 4
Term: Autumn

WEEK	WEEK BEGINNING	TOPIC
1	4 th September	Fundamentals of algorithms: Algorithms (flowcharts – pseudocode)
2	10 th September	Programming recap: Python – IDLE – variables – operations
3	17 th September	Programming: Boolean logic, Programming structures
4	24 nd September	Programming: Programming structures
5	1 st October	Programming: Programming structures
6	8 th October	MINI - TEST
7	15 th October	Programming: Data structures
HALF - TERM		
8	29 th October	Programming: Data structures
9	5 th November	Programming: String handling operations in python
10	12 th November	Programming: Subroutines (procedures and functions)
11	19 th November	Revision
12	26 th November	END OF TERM EXAM
13	3 rd December	Programming: Random number generation, File handling
14	10 th December	Programming: Structured programming, Robust and secure programming (data validation, authentication, test data)

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Term: Spring

WEEK	WEEK BEGINNING	TOPIC
1	7 th January	Programming: Programming languages – translators
2	14 th January	Fundamentals of data representation: Numeric systems (decimal, binary, hexadecimal). Converting between number bases
3	21 st January	Fundamentals of data representation: Binary arithmetic, Character encoding
4	28 th January	Fundamentals of data representation: Representing images, sound
5	4 th February	MINI - TEST
6	11 th February	Fundamentals of data representation: Data compression
HALF – TERM		
7	23 rd February	Fundamentals of data representation: Converting between number bases Programming: Putting it all together
8	2 nd March	Computer systems: Hardware and software, Boolean logic + logic circuits
9	9 th March	Computer systems: Software classification, Systems architecture (CPU, memory, secondary storage, embedded systems)
10	16 th March	Computer systems: Systems architecture (CPU, memory, secondary storage, embedded systems)
11	25 th March	Fundamentals of computer networks: Computer networks – types, Network protocols

12	1 st April	Fundamentals of computer networks: Network security Programming: Putting it all together
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Term: Summer

WEEK	WEEK BEGINNING	TOPIC
1	29 th April	Fundamentals of computer networks: TCP/IP model Programming: Putting it all together
2	6 th May	Fundamentals of cyber security: Security threats, Social engineering, Malicious code
3	13 th May	Fundamentals of cyber security: How to detect and prevent cyber security threats
4	20 th May	Ethical, legal and environmental impacts & issues of privacy: Ethical, legal and environmental impacts and risks of digital technology on society. Data privacy
HALF – TERM		
5	3 rd June	Revision
6	10 th June	END OF YEAR EXAM
7	17 th June	Aspects of software development: Design, implementation, testing, evaluation
8	24 th June	Aspects of software development: Design, implementation, testing, evaluation
9	1 st July	Software development: Putting it all together