

St John's Senior School



Subject: Computer Science
Teacher: Mr. Zampekos

Form: Lower 6th
Term: Autumn

WEEK	WEEK BEGINNING	TOPIC
1	2 nd September	Algorithms and programs: Introduction-Flowcharts-Pseudocode
2	9 th September	Algorithms and programs: Variables and constants, Identifiers, Mathematical operations (including DIV and MOD), Logical operations
3	16 th September	Algorithms and programs: Introduction to python and IDLE Programming constructs
4	23 rd September	Algorithms and programs: Application of concepts, operations and simple data constructs to complete simple programs and develop the confidence to experiment. Practical experience of programming
5	30 th September	Algorithms and programs: Modular programming, Scope of variables, Parameters. Practical experience of programming
6	7 th October	Data structures. Progression to a wider range of program tasks, including 1- and 2- dimensional arrays. MINI – TEST
7	14 th October	Algorithms and programs: Searching and sorting algorithms. Practical experience of programming. Progression to a wider range of program tasks, including 1- and 2- dimensional arrays
HALF – TERM		
8	28 th October	Algorithms and programs: Compression algorithms. Testing algorithms. Practical experience of programming
9	4 th November	Algorithms and programs: Logical operations. Practical experience of programming. Progression to a wider range of program tasks, including 1- and 2- dimensional arrays.
10	11 th November	Software engineering: Software tools. Practical experience of programming
11	18 th November	Data representation and data types: Representation of data as bit patterns
12	25 th November	Data representation and data types: Storage of characters. Data types.

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13	2 nd December	Data representation and data types: Representation of numbers as bit patterns
14	9 th December	Organisation of data.

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Term: Spring

WEEK	WEEK BEGINNING	TOPIC
1	6 th January	MOCK EXAMS
2	13 th January	Database systems.
3	20 th January	Hardware and communication: Architecture
4	27 th January	Hardware and communication: Fetch-execute cycle
5	3 rd February	Hardware and communication: Input / output. Secondary storage. Data storage on disc.
6	10 th February	Hardware and communication: Networking. Internet. Data transmission: Types and techniques. Communication networks.
HALF – TERM		
7	24 th February	The operating system. Principles of programming.
8	2 nd March	Principles of programming. Program construction.
9	9 th March	Systems analysis.
10	16 th March	The need for different types of software systems and their attributes.
11	23 rd March	Practical programming.

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Term: Summer

WEEK	WEEK BEGINNING	TOPIC
1	20 th April	Data security and integrity processes. Economic, moral, legal, ethical and cultural issues relating to computer science.
2	27 th April	REVISION.
3	4 th May	REVISION.
4	11 th May	REVISION.
5	18 th May	REVISION.
HALF – TERM		
6	1 st June	EXAMS / REVISION.
7	8 th June	EXAMS / REVISION
8	15 th June	EXAMS / REVISION
9	22 nd June	EXAMS / REVISION
10	29 th June	Introduction to / Investigation for A2 Project.
11	6 th July	Introduction to / Investigation for A2 Project.