

Computer Science 2210

The City School

Computer Science (2210)

O Level

Syllabus Break up 2018-19

Class 9

Term	No. of weeks	No. of lessons/week	Topic/Unit	Objectives	Resources
1	1-6	3	Introduction to computer systems <ul style="list-style-type: none">Input Devices	<ul style="list-style-type: none">describe how a range of sensors can be used to input data into a computer system, including light, temperature, magnetic field, gas, pressure, moisture, humidity, pH and motiondescribe how these sensors are used in real-life scenarios	Cambridge IGCSE Computer Science (David Watson, Helen Williams) by Hodder Education
			Input Devices	<ul style="list-style-type: none">describe the principles of operationUse of sensors with examples street lights, security devices, pollution control, games, and household and industrial applications	Cambridge IGCSE Computer Science (David Watson, Helen Williams) by Hodder Education

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1		3	Output Devices	<ul style="list-style-type: none"> describe the principles of operation of the following output devices: inkjet, laser and 3D printers; 2D and 3D cutters; speakers and headphones; actuators; flat-panel display screens, including Liquid Crystal Display (LCD) and Light-Emitting Diodes (LED) display; LCD projectors and (DLP) describe how these principles are applied to real-life scenarios, for example: printing single items on demand or in large volumes; use of small screens on mobile devices 	Cambridge IGCSE Computer Science (David Watson, Helen Williams) by Hodder Education
	7-12	3	Memory and data storage	<ul style="list-style-type: none"> show understanding of the difference between: primary, secondary and off-line storage and provide examples of each, such as: primary: Read Only Memory (ROM), and Random Access Memory (RAM) secondary: hard disk drive (HDD) and Solid State Drive (SSD); off-line: Digital Versatile Disc DVD), Compact Disc (CD), Blu-ray disc, USB flash memory and removable HDD. describe the principles of operation of a range of types of storage device 	Cambridge IGCSE Computer Science (David Watson, Helen Williams) by Hodder Education

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				<p>and media including magnetic, optical and solid state</p> <ul style="list-style-type: none"> • General concept of Lossless and lossy file compression 	
13-14				Revision	
2	1-8	3	Binary systems and hexadecimal	<ul style="list-style-type: none"> • recognize the use of binary numbers in computer systems • convert positive denary integers into binary and positive binary integers into denary • show understanding of the concept of a byte and how the byte is used to measure memory size use binary in computer registers for a given application (such as in robotics, digital instruments and counting systems) • represent integers as hexadecimal numbers • show understanding of the reasons for choosing hexadecimal to represent numbers • convert positive hexadecimal integers to and from denary • convert positive hexadecimal integers to and from binary • represent numbers stored in registers and main memory as hexadecimal • identify current uses of hexadecimal numbers in computing, such as defining 	

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				colors in Hypertext Markup Language (HTML), Media Access Control (MAC) addresses, assembly languages and machine code, debugging	
2	9-14	3	Operating systems and computer architecture	<ul style="list-style-type: none">• describe the purpose of an operating system• show understanding of the need for interrupts	
15-16			Revision		
