



**Dubai International Private School -Br**  
**DIPS**, in partnership with parents and community, strives to ensure all students are digitally literate, lifelong learners, productive citizens and nurture their well-being in an inclusive learning environment.



### Computer Department

**Semester: 1**

**2024 – 2025**

<b>Grade Level</b>	12	<b>Subject: Communication and Technology</b>		
<b>Teacher(s) Name</b>	Mr. Nader Madi			
<b>Textbook</b>	Information and Communication Technology			
Week #	Dates		Lesson Title / Pages	CCSS / NGSS Code
1	26 Aug	30 Aug	<ul style="list-style-type: none"> <li>Investigates the basic building blocks of information and their characteristics</li> <li>Investigates the need of technology to create, disseminate and manage data and information</li> </ul>	Explores the basic concepts of ICT together with its role and applicability in today's knowledge-based society
2	2 Sept	6 Sept	<ul style="list-style-type: none"> <li>Formulates an abstract model of information creation and evaluates its compliance with ICT</li> <li>Selects and classifies the basic components of a computer system</li> </ul>	Explores the basic concepts of ICT together with its role and applicability in today's knowledge-based society
3	9 Sept	13 Sept	<ul style="list-style-type: none"> <li>Analyses the activities of data processing</li> <li>Investigates the application of ICT in different domains</li> </ul>	Explores the basic concepts of ICT together with its role and applicability in today's knowledge-based society
4	16 Sept	20 Sept	<ul style="list-style-type: none"> <li>Evaluates the impact of ICT in the society</li> </ul>	Explores the basic concepts of ICT together with its role and applicability in today's knowledge-based society
5	23 Sept	27 Sept	<ul style="list-style-type: none"> <li>Elicits the significant changes occurred in the computers from generation to generation with more emphasis on the evolution of processors</li> <li>Explores the functionality of a computer in relation to the hardware and their interfaces</li> </ul>	Explores the evolution of computing devices, to be able to describe and compare the performance of modern computers
6	30 Sept	4 Oct	<ul style="list-style-type: none"> <li>Explores the Von Neumann Architecture</li> <li>Examines PC memory system to identify different types of memory and their main characteristics</li> </ul>	Explores the evolution of computing devices, to be able to describe and compare the performance of modern computers



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7	7 Oct	11 Oct	<ul style="list-style-type: none"> <li>Examines PC memory system to identify different types of memory and their main characteristics</li> </ul>	Explores the evolution of computing devices, to be able to describe and compare the performance of modern computers
8	14 Oct	18 Oct	<ul style="list-style-type: none"> <li>Analyses how numbers are represented in computers</li> <li>Analyses how characters are represented in computers</li> </ul>	Investigates how instructions and data are represented in computers and exploit them in arithmetic and logic operations
9	21 Oct	25 Oct	<ul style="list-style-type: none"> <li>Uses basic arithmetic and logic operations on binary numbers</li> </ul>	Investigates how instructions and data are represented in computers and exploit them in arithmetic and logic operations
10	28 Oct	1 Nov	<ul style="list-style-type: none"> <li>Analyzes basic digital logic gates in terms of their unique functionalities</li> <li>Simplifies logic expressions using laws of Boolean algebra and Karnaugh map</li> </ul>	Investigates how instructions and data are represented in computers and exploit them in arithmetic and logic operations
11	4 Nov	8 Nov	<ul style="list-style-type: none"> <li>Designs simple digital circuits using logic gates</li> <li>Explores how combinational Logic circuits are used in CPU and sequential circuits in physical memory</li> </ul>	Investigates how instructions and data are represented in computers and exploit them in arithmetic and logic operations
12	11 Nov	15 Nov	<ul style="list-style-type: none"> <li>Defines the term computer operating system (OS) and investigates its need in computer systems</li> <li>Explores how an operating system manages directories/folders and files in computers</li> </ul>	Uses operating systems to manage the functionality of computers
13	18 Nov	22 Nov	<ul style="list-style-type: none"> <li>Explores how an operating system manages processes in computers</li> <li>Explores how an operating system manages the resources</li> </ul>	Uses operating systems to manage the functionality of computers
14	25 Nov	29 Nov	<ul style="list-style-type: none"> <li>Explores signals and their properties</li> <li>Explores signal transmission media</li> </ul>	Explores the data communication and computer networking technologies to share information effectively
15	2 Dec	6 Dec	<ul style="list-style-type: none"> <li>Investigates how digital data is encoded using signal elements</li> <li>Explores the use of Public Switched Telephone Network (PSTN) to connect two remote devices</li> </ul>	Explores the data communication and computer networking technologies to share information effectively
16	9 Dec	13 Dec	<ul style="list-style-type: none"> <li>Investigates how the problem of connecting multiple devices into a network is addressed</li> <li>Explores the role of Media Access Control (MAC) protocol</li> </ul>	Explores the data communication and computer networking technologies to share information effectively



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17	6 Jan	10 Jan	<ul style="list-style-type: none"><li>• Explores how the multiple networks are interconnected to form the Internet</li><li>• Explores the role of transport protocols on the Internet</li></ul>	Explores the data communication and computer networking technologies to share information effectively
18	13 Jan	17 Jan	<b>Final Exams</b>	
19	20 Jan	24 Jan	<b>Final Exams</b>	