Syllabus

Academic Year – 2023/2024

Module Name   : Computer Science

Grade   : Grade 7

Module Content

Unit/ Lesson	Unit 1 - Introduction to Computers

Sub-Topics

1. What is a Computer
2. Features of a computer
3. Main parts of a computer
   3.1. Input Devices
   3.2. Output Devices
   3.3. CPU
   3.4. Storage Devices

Teaching Aids

1. Text Book
2. Videos / Presentation

Practicals and Material Requirements

1. Computer and projector to play the videos and presentations

Unit/ Lesson	Unit 2 - Software

Sub-Topics

1. System Software
2. Application Software

Teaching Aids

1. Text Book
2. Videos / Presentation

Practicals and Material Requirements

1. Computer and projector to play the videos and presentations

Unit/ Lesson	Unit 3 - User Interface

Sub-Topics

1. Command Line Interface
2. Graphical User Interface

Teaching Aids

1. Text Book
2. Videos / Presentation

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Practicals and Material Requirements
1. Computer and projector to play the videos and presentations

Unit/ Lesson	Unit 4 - Computer Viruses
Sub-Topics	
1. What is a Computer Virus 2. What is an Anti - Virus Program	
Teaching Aids	
1. Text Book 2. Videos / Presentation	
Practicals and Material Requirements	
1. Computer and projector to play the videos and presentations	

Unit/ Lesson	Unit 5 - Data Representation
Sub-Topics	
1. Number System 2. Convert decimal numbers into binary 3. Convert binary numbers into decimal 4. What is ASCII 5. Write ASCII codes for letters and words	
Teaching Aids	
1. Text Book 2. White Board and Markers	
Practicals and Material Requirements	
N/A	

Unit/ Lesson	Unit 6 - Micro Controllers
Sub-Topics	
1. What is a Sensor 2. What is a Micro Controller 3. Applications of Micro controllers	

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Teaching Aids

1. Text Book
2. Videos / Presentation

Practicals and Material Requirements

1. Computer and projector to play the videos and presentations

Unit/ Lesson	Unit 7 - Programming Concepts

Sub-Topics

1. Algorithms / Flowcharts / Pseudocodes
2. Keywords and Operators used in Pseudocodes and Flowcharts
3. Variables and Data types
4. Control Structures
5. Write Pseudocodes
6. Draw Flowcharts

Teaching Aids

1. Text Book
2. White Board and Markers

Practicals and Material Requirements

N/A

Unit/ Lesson	Unit 8 - Database

Sub-Topics

1. What is a Database
2. Comparing Manual database and Electronic database
3. Hierarchy of a database
4. What is DBMS
5. Database objects
6. Advantages and Disadvantages of DBMS

Teaching Aids

1. Text Book
2. Videos / Presentation

Practicals and Material Requirements

1. Computer and projector to play the videos and presentations

Unit/ Lesson	Unit 9 - Internet

Sub-Topics

1. What is Internet
2. Basic needs to connect to the Internet
3. Web site / URL
4. Search Engine / Web Server

Teaching Aids

1. Text Book
2. Videos / Presentation

Practicals and Material Requirements

1. Computer and projector to play the videos and presentations

Unit/ Lesson	Unit 10 - Revision Questions

Sub-Topics

1. Expand the Abbreviations
2. Conversion of numbers into binary and decimal
3. ASCII codes
4. Pseudocodes
5. Flowcharts
6. HTML program

Teaching Aids

1.Text Book

2.White Board and Markers

Practicals and Material Requirements

N/A

Unit/ Lesson	Practical 1 - Word Processing

Sub-Topics

1. Inserting and formatting a picture
2. Creating a Flyer
3. Creating a Table and sorting records

Teaching Aids

1. Text Book
2. Computer
3. Projector

Practicals and Material Requirements

1. Computers
2. Open Office

Unit/ Lesson	Practical 2 - Spreadsheet

Sub-Topics

1. Merging cells and text wrapping
2. Formulas and Functions
3. Charts
4. IF Function

Teaching Aids

1.Text Book
2.Computer
3. Projector

Practicals and Material Requirements

1.Computers
2.Open Office

Unit/ Lesson	Practical 3 - Computer Art and Design

Sub-Topics

1. Draw a simple smiley face
2. Create a postage stamp
3. Butterfly Technique
4. Draw the Pac-Man Baddie

Teaching Aids

1. Textbook
2. Computer
3. Projector

Practicals and Material Requirements

1. Computers
2. Inkscape

Unit/ Lesson	Practical 4 - Programming with Python

Sub-Topics

1. Introduction to Python
2. Variables and Variable names
3. Data Types and Lists
4. Python Operators
5. Python conditions and IF statements

Teaching Aids

1. Python handout
2. Computer
3. Projector

Practicals and Material Requirements

1. Computers
2. Python

Unit/ Lesson	Practical 5 - Database

Sub-Topics

1. Create a Table
2. Setting a primary key
3. Queries

Teaching Aids

1. Text Book
2. Computer
3. Projector

Practicals and Material Requirements

1. Computers
2. Open Office

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Unit/ Lesson	Practical 6 - Basic HTML
Sub-Topics 1.Basic structure of an HTML document 2.HTML Tags 3.Web page designing using HTML	
Teaching Aids 1.Text Book 2.Computer 3.Projector	
Practicals and Material Requirements 1. Computers 2. Gedit text editor	

Text Books & Recommended Texts

Text Books List - For Students

Computer Science Grade 7 text book

Python Handout

Recommended Texts - For Teachers

N/A

Scheme of work
Academic Year – 2023 / 2024

Subject:	Computer Science
Grade :	7

[T.G = Teachers' guide   / T.B = Textbook   / W.B = Workbook]

<mark>1st Term</mark>

Month	Week	Unit	Lesson / Sub unit	Page numbers			Teaching aids / Practicals
				T. G	T. B	W. B	
September	1st week	Unit 1	Introduction to Computers		1		Practical 1 Word Processing Exercise 1
	2nd week	Unit 1	Input Devices Output Devices		3		Practical 1 Word Processing Exercise 2
	3rd week	Unit 1	Central Processing Unit Storage Devices		5		Practical 1 Word Processing Exercise 3
	4th week	Unit 1	Exercise		7		Practical 1 Word Processing Activity
October	1st week	Unit 2	Software Types of software		8		Practical 2 Spreadsheet Exercise 1
	2nd week	Unit 2	Exercise		9		Practical 2 Spreadsheet Exercise 1
	3rd week	Unit 3	User Interface		10		Practical 2 Spreadsheet Exercise 2
	4th week	Unit 3	Exercise		10		Practical 2 Spreadsheet Exercise 2
Monthly Test – October 2023							
November	1st week	Unit 4	Computer Viruses Exercise		11		Practical 2 Spreadsheet Exercise 3
	2nd week	Unit 5	Data Representation Conversion of Decimal to Binary		13		Practical 2 Spreadsheet Exercise 4
	3rd week	Unit 5	Conversion of Binary to Decimal		14		Practical 2 Spreadsheet Activity
	4th week	Unit 5	ASCII		15		Practical 2 Spreadsheet Activity

January	1st week	Unit 6	Micro Controllers		16		Practical 3 Computer Art & Design Exercise 1 & 2
	2nd week	Unit 6	Micro Controllers Continued & Exercise		17		Practical 3 Computer Art & Design Exercise 3
	3rd week	Unit 7	Programming Concepts		18		Practical 3 Computer Art & Design Exercise 4
	4th week	Unit 7	Algorithm Flow Chart Pseudocode Variables		19		Practical 3 Computer Art & Design Exercise 5
Monthly Test – January 2024							
February	1st week	Unit 7	Data Types		22		Practical 4 Programming with Python Creating Variables - Exercise 1
	2nd week	Unit 7	Exercise 1		23		Practical 4 Programming with Python Variable Names - Exercise 2
	3rd week	Unit 7	Write Pseudocode Draw Flow Charts		24		Practical 4 Programming with Python Data Types - Exercise 3
	4th week	Unit 7	Exercise 2		24		Practical 4 Programming with Python Lists in Python - Exercise 4
March	1st week	Unit 7	Selection (Making Decision)		25		Practical 4 Programming with Python Python Operators - Exercise 5
	2nd week	Unit 7	Exercise 3		26		Practical 4 Programming with Python Python conditions and if statements Exercise 6
	3rd week	Unit 7	Exercise 3		26		Practical 4 Programming with Python Nested if statements Exercise 7
1st Semester Examination - March 2024							

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May	1st week	Unit 8	Database Hierarchy of a Database		27		Practical 5 Database
	2nd week	Unit 8	DBMS		28		Practical 5 Database Questions
	3rd week	Unit 8	Database Objects		29		Practical 5 Database Questions
	4th week	Unit 8	Advantages & Disadvantages Exercise		31		Practical 5 Database Activity
Monthly Test – May 2024							
June	1st week	Unit 9	Internet		32		Practical 6 Basic HTML
	2nd week	Unit 9	Web Site URL		33		Practical 6 Exercise 1 Web Page Designing
	3rd week	Unit 9	Web Server Search Engine		34		Practical 6 Exercise 2
	4th week	Unit 9	Exercise		35		Practical 6 Activity
July	1st week	Unit 10	Revision Questions		36		Practical Revision
	2nd week	Unit 10	Revision Questions		37		Practical Revision
	3rd week	Unit 10	Revision Questions		37		Practical Revision
2nd Semester Examination – July 2024							

Grade 7 : Computer Science

LYCEUM INTERNATIONAL SCHOOL

Table Of Specifications
2023/2024

LYCEUM ASSESSMENTS

Sub Computer Science
Grade 7

Syllabus Ref. No	Content	M.C.Q. 's																			Structured									
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	Term 1																														
Sep	Introduction to computers																														
	Input devices and Output devices																														
	CPU / Storage devices																														
Oct	Software / Types of software																														
	User Interface																														
	Exercise																														
	Monthly Test - October 2023																														
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Sub Computer Science

Grade 7

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	Advantages & Disadvantages																															
	Monthly Test - May 2024																															
Jun	Internet																															
	Website URL																															
	Web server Search Engine																															
Jul	Revision Questions																															
	2nd Semester Examination - July 2024																															

M.C.Q.'s   : ....

Date   : ....

Structured Questions : ....

Date   : ....

Subject Teacher : ....

Signature : ....

Subject Teacher : ....

Signature : ....

Ref : LYA.EXM.CF

Last Update : 30.05.2023