



COMPUTER STUDIES SCHEME
CLASS: - SS3

SN	TOPICS	CONTENT
1	Networking	<p>Definition of networking</p> <p>Types of Networking</p> <ul style="list-style-type: none">- Ethernet- Token ring- Arcnet <p>Network Topology:</p> <ul style="list-style-type: none">(1) Star topology(2) Bus topology(3) Ring topology <p>Network Devices</p> <ul style="list-style-type: none">- Hubs- Modems- Switches- Routers- Network Interface Card (NIC) <p>Benefits of Networking:</p> <ul style="list-style-type: none">- Sharing of resources- Ease of communication- Ease of collaboration, etc
2	Introduction to World Wide Web (www)	<p>Definition and full meaning of www</p> <p>Brief history of www (Nigerian contribution to www)</p> <p>Basic terminologies:</p> <ul style="list-style-type: none">- www- Website- Web page

		<ul style="list-style-type: none">- Home page- Protocol, etc Protocols: <ul style="list-style-type: none">(1) HTTP(2) HTML Uses/Benefits of www Navigating through websites e.g www.fmegovng.org www.waeconline.org , etc Software for web development, e.g Front page, Dreamweaver, etc
3	Cables and Connectors	Network cables and connectors <ul style="list-style-type: none">- Cables<ul style="list-style-type: none">(1) Twisted pair(2) Coaxial(3) Fibre optic(4) Telephone- Connectors<ul style="list-style-type: none">(1) RJ45(2) RJ11(3) T-Connector Computer cables and connectors <ul style="list-style-type: none">- Power cables- Data cables<ul style="list-style-type: none">(1) Printer cables(2) Universal Serial Bus (USB)(3) Monitor Cable(4) Serial cable Connectors <ul style="list-style-type: none">- Male connector- Female connector
4	Database	Definition of: <ul style="list-style-type: none">- Database- Database package (DBMS) Examples of DBMS: Dbase III, Dbase IV, Rbase, SQL Server, etc Basic terminologies <ul style="list-style-type: none">- File- Record- Field- Key

		<p>Forms of database organization:</p> <ol style="list-style-type: none">(1) Network(2) Hierarchical(3) Relational <p>Computer database format:</p> <ul style="list-style-type: none">- File designed as tables- Tables composed of rows and columns- Row (record) contains related information- Column (field) contains specific type of information <p>Creating database:</p> <ul style="list-style-type: none">- Define the structure- Indicate field type- Enter and save data <p>Basic operations:</p> <ul style="list-style-type: none">- Searching- Sorting- Modifying- Generating report
5	Graphics (introduction to CorelDraw)	<p>Definition of Graphics</p> <p>Examples of Graphic Packages:</p> <ul style="list-style-type: none">- Paint- Harvard Graphics- Photoshop- CorelDraw , etc <p>Features in CorelDraw environ:</p> <ul style="list-style-type: none">- Tools- Color Palette, etc <p>Opening CorelDraw from program (Hand on Equipment)</p> <p>Simple designs:</p> <ul style="list-style-type: none">- Complementary cards- Business cards- Birthday/congratulatory cards- School logo

		<ul style="list-style-type: none"> - Nigerian flag
6	BASIC Programming III (One-dimensional array)	<p>Definition of one-dimensional array (i.e using DIM statement)</p> <p>Operations on array:</p> <ul style="list-style-type: none"> - Input of an array - Output of array - Arithmetic on array <p>Review of the:</p> <ul style="list-style-type: none"> - FOR – NEXT statement - WHILE – END statement - DIM statement (one-dimensional array) <p>Write BASIC Program to:</p> <ol style="list-style-type: none"> (1) State data in a vector of 10 integer with and without a FOR-NEXT statement (2) Calculate the average of a one dimensional array with 100 numeric values (3) Calculate the area of 10 different rectangles with and without the WHILE-END statement (4) Output the sum of the first 100 integers (5) Output the value elements of a given array
7	High level Languages (HLL)	<p>Definition of High Level Language (HLL)</p> <p>Examples of HLL: BASIC, FORTRAN, ALGOL, C, PASCAL, P/1, LISP, PROLOG, SNOBOL, COBOL</p> <p>Scientific Languages: BASIC FORTRAN, ALGOL</p> <p>General purpose; C, PASCAL, PL/1</p>

		<p>Artificial Intelligence AI: LISP, PROLOG</p> <p>Special purpose Programming Languages: SNOBOL</p> <p>Business Languages: COBOL</p> <p>Interpreted Languages: PASCAL, COBOL, C, FORTRAN</p> <p>Features of BASIC, C, PASCAL, COBOL</p> <p>Advantages of HLL over Machine Languages and Low Level Languages</p>
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8	Overview of Number Bases	<p>Review of Number Bases</p> <ul style="list-style-type: none">- Binary- Octal- Decimal- Hexadecimal <p>Conversion in Number Bases</p> <p>Basic arithmetic in Number Bases</p> <ul style="list-style-type: none">- Addition- Subtraction
9	Data Representation	<p>Definition of data representation</p> <p>Description of data representation methods:</p> <ul style="list-style-type: none">- Bits- BCD- EBCDIC

		<ul style="list-style-type: none"> - ASCII <p>Computer character sets</p>
10	Security and Ethics	<p>Sources of security breaches</p> <ul style="list-style-type: none"> - Virus, Worms and Trojan horses - Poorly implemented Network - Poorly implemented or lack of ICT policy - Carelessness – giving out personal and vital information on the net without careful screening - Hackers <p>Preventive measures:</p> <ul style="list-style-type: none"> - Use of Anti-virus software - Use of fire wall - Exercising care in giving out personal and vital information - Encryption - Proper network implementation and policy - Using sites with web certificate