COMPUTER STUDIES **SCHEME OF WORK** **YEAR 7**

Duration (no of weeks)	Topic	Learning Objectives	Learning Activities	Learning outcome (At the end of the lessons, students will be able to ...)	Resources	Assessment
1 week	Introduction to computers	Be able to identify different types of computers and computer systems.	Task: a survey form where students can fill in some information about computers in front of them. (Appendix 1) Group Work: Discuss: 1. Benefits of using computers. 2. Simple characteristics of a computer.	• state the simple characteristics of a computer. • identify special purpose (embedded system) and general purpose computers. • define what a program is. • give examples of operating systems (OS) and application software.	B5: (Pg 2 - 5)	Suggested Exercise B8: (Pg 1 - 2)
	Computer Lab Personal safety rules	Be able to practise basic safety rules in the computer lab.	Group Work: Discuss rules for computer lab.	• state the Computer Lab Personal Safety Rules.	B17: (Pg 18 – 20)	Suggested Exercises B8: (Pg 21) B3: (Pg 13)
1 week	Basic Principles of computers	Be able to explain the basic operations of a computer and draw a simple block diagram to show how a computer operates.	Task: Identify the basic operations of a computer (e.g. mobile phone, washing machine, etc.).	• explain the basic working principles of computers : input-process-output. • draw a simple block diagram to show how a computer works.	B17: (Pg 4) B7: (Pg 8 – 9) Online Resource: Basic Principles (Appendix 4)	Suggested Exercises B3: (Pg 4)

Duration (no of weeks)	Topic	Learning Objectives	Learning Activities	Learning outcome (At the end of the lessons, students will be able to ...)	Resources	Assessment
1 week	The Computer System	Be able to identify and name the different components of a computer system	Demonstration: Shows different components of a computer system.	• identify different components of computer system: monitor, system unit, keyboard, mouse, printer, etc. • name the different components of computer system.	B17: (Pg 10) Online Resource: Computer Parts (Appendix 4)	Suggested Exercise B3: (Pg 29 – 30)
	Computer System Electrical Connections	Be able to identify and connect different parts of a desktop computer with hardware.	Hands-on: Disconnect and reconnect the different parts of a computer.	• connect the different parts of a desktop computer.	B5: (Pg 13 – 20)	Suggested Exercises B8: (Pg 8) B3: (Pg 10 – 12)
1 week	Graphics: Microsoft Paint	• Be able to state some uses of computer graphics. • Be able to create graphics using basic graphic elements such as lines, curves, sectors, polygons, circles, ovals, squares and rectangles.	Hands-on: • To draw some pictures. e.g. cat, flower, dinosaur or a face. • Save your work.	• create, save, open and close MS Paint application. • save file with a different name, type and in a different folder. • import pictures from Clip-art. • draw different pictures using graphic tools available in the application. Suggested MS Paint check list (Appendix 2)	B5: (pg 120 –134) B11: (pg 10 - 12) Online Resource: Microsoft Paint (Appendix 4)	Suggested Exercises B8: (pg.108, 110 -111, 136)

Duration (no of weeks)	Topic	Learning Objectives	Learning Activities	Learning outcome (At the end of the lessons, students will be able to ...)	Resources	Assessment
2 weeks	Care for computer systems, secondary storage media and simple health issues.	Be able to handle computer equipment properly. Be able to practise safety measures of using a computer.	Group Work: Discuss care for using • computer • floppy disk • CDROM • Monitor • Printer • Simple health issues.	• state proper ways of handling and taking care of computer equipment. • practice safety methods of working. • use computers wisely in relation to health issues (e.g. using screen filter, proper posture, etc).	B17: (Pg 20 – 23) B5: (Pg 32 – 38) Online Resource: Health & Safety (Appendix 4)	Suggested Exercises B8: (Pg 19 – 20) B3: (Pg 14 -16)
2 weeks	Input, output and storage devices I/O units	Be able to identify and state the functions of input devices, output devices and storage devices.	Task: Search for pictures of different input, output storage devices and I/O units from the internet and state the uses of each device.	• list some examples of input devices: keyboard, mouse, scanner, bar code reader, joystick, voice recognizer, etc. • list some examples of output devices: monitor, printer, plotter, voice output device, Computer Output on Microfilm or Microfiche, etc. • list some examples of I/O devices: touchpad, floppy disk, pen drive etc. • list examples of permanent storage such as floppy disk, hard disk, CDROM, CD-R/W, DVD, USB Flash memory disks , tapes, pen drive, memory stick, etc.	B17: (Pg 48 -54) B6: (Pg 14). Online Resources: Input devices Output devices Storage devices (Appendix 4)	Suggested Exercises B3: (Pg 6 – 9, 43 - 49)

Duration (no of weeks)	Topic	Learning Objectives	Learning Activities	Learning outcome (At the end of the lessons, students will be able to ...)	Resources	Assessment
3 weeks	Windows Basic Mac Finder Windows and Basics	Be able to identify the features of a Windows and /or Mac Finder Windows	Demonstration: Show Windows desktop and Windows Explorer screen. Show Finder Windows.	• identify the different parts of a window: title bar, menu bar, toolbar, status bar, scroll bar. • recognize common desktop icons such as those representing open a file, directory/folder, application form the desktop. • create a shortcut icon, desktop menu etc.	B5: (Pg 21 – 31) Online Resources: Windows Basics File Management (Appendix 4) Mac Finder Windows (Appendix 5)	Suggested Exercise B3: (Pg 52 – 55)
	File Management	Be able to perform basic housekeeping tasks and organise files and folders.	Hands-On: Create folders and sub-folders.	• create folders and sub-folders. • copy, delete and rename files and folders. • back up data. • retrieve and save files.		Suggested Exercise B3: (Pg 56- 57)
	Troubleshooting computers	Be able to perform simple troubleshooting of computer if the computer hangs.	Hands-On: Reboot computer. (Using <CTRL+ ALT+DEL> for IBM Computers) Shut down the computer system properly.	• shut down the computer properly if it hangs.	B6: (Pg 2 - 8)	Suggested Exercise B9: (Pg 4 – 5)

Duration (no of weeks)	Topic	Learning Objectives	Learning Activities	Learning outcome (At the end of the lessons, students will be able to ...)	Resources	Assessment
1 week	Main memory and capacity of storage devices	Be able to identify and name different types of storage devices with its storage capacity.	Group Work: Discuss • Bit, Bytes, KB, MB, GB , TB. • RAM, ROM. Hands-on: Use the computer to identify the storage capacity of Hard disk and other secondary storage devices.	• differentiate between bit and byte. • state the measurement unit of computer memory: bit, byte, KB, MB, GB, TB and relate the computer memory measurements to characters, files and directories/folders. • differentiate between RAM and ROM • identify capacity of storage devices: hard disk, floppy disk, CD-R, CD-RW, DVD, DVD-RW, Thumb drive etc.	B6: (Pg 9 - 16) Online Resources: Bits & Bytes Computer Memory (Appendix 5)	Suggested Exercises B9 (Pg 7 - 11)
1 week	Central Processing Unit	Be able to explain the function of the 3 components of a CPU.	Role Play: Students can act as memory unit, ALU, Control unit etc for solving simple arithmetic problems.	• state the functions of the three components of CPU. • state the unit for the speed of CPU in terms of hertz.	B17: (Pg 40 - 41) Online Resource: CPU (Appendix 5)	Suggested Exercise B3: (Pg 36 – 38)
1 week	Types of computers	Be able to list different types of a computer and differentiate between special purpose and general purpose computers.	Task: Search different types of computers from the internet, copy and label the pictures.	• identify and name the different types of computers according to the size, power and purposes: microcomputer, minicomputer, mainframe computer, notebook, palmtop etc. • give examples of special-purpose (embedded system) and general-purpose computers. • state the differences between special purpose and general purpose computers.	B17: (Pg 133 - 144) Online Resource: Types of Computers (Appendix 5)	Suggested Exercise B8: (Pg 25, 27)

Duration (no of weeks)	Topic	Learning Objectives	Learning Activities	Learning outcome (At the end of the lessons, students will be able to ...)	Resources	Assessment
1 week	Types of Software	Be able to list different types of software - operating system and application software.	Task : Explore the Operating system and application software used in school.	• distinguish between operating systems and application software. • give examples of system software and application software. • differentiate between ready made and user-designed application software.	B17: (Pg 72 - 75) Online Resource: Types of Software (Appendix 5)	Suggested Exercises B8: (Pg 3)
1 week	Operating System	Be able to describe the functions of operating system and name some common operating system software.	Demonstration: 1. use some DOS commands such as CLS, COPY, DIR,. 2. Utility software: run any antidote software.	• define operating system. • state the tasks of OS: o control the hardware o manage data files on the disk o run computer program • state what utility software is and give examples.	B17: (Pg 56 - 63) Online Resource: Operating System (Appendix 5)	Checklist on DOS Commands Suggested Exercises B9: (Pg 3 – 4) B3: (Pg 49 -52)
1 week	Application software	Be able to list some common application software with its uses.	Demonstration: Run and show the different application software available.	• List some common software applications such as word processing, spreadsheet, database, web browsing, desktop publishing, accounting together with their uses.	B17: (Pg 76 - 84) Online Resource: Application Software (Appendix 5)	Suggested Exercises B8: (Pg 4)

Duration (no of weeks)	Topic	Learning Objectives	Learning Activities	Learning outcome (At the end of the lessons, students will be able to ...)	Resources	Assessment
3 weeks	Practice with Word Processing	Be able to create a document, showing ability to format text, paragraphs and documents. Be able to use Language Correction and Thesaurus Tools.	Hands-on: • Type a letter and save it. • Open, edit and save the letter again with the same name and with different names. Hands-on: • Produce a report (include other formatting features).	• create, open and close documents. • save documents with different names and in a different folders. • type and edit and format text. • use character formatting tasks and paragraph formatting task on the document. • switch between document windows and other open window. • use the language correction tools. • use the thesaurus tool. • Identify the function of the main and the user dictionary. (Appendix 2)	B2: (Pg 26-48) B4: (Pg 30-35) B4: (Pg 37) Online Resource: MS Word Tutorial (Appendix 5)	Suggested exercise: B4: (Pg 17-29)

Duration (no of weeks)	Topic	Learning Objectives	Learning Activities	Learning outcome (At the end of the lessons, students will be able to ...)	Resources	Assessment
4 weeks	Internet: Technical Terms Internet: Advantages and disadvantages, system requirement Internet: Topical Projects	Be able to identify and make use of web browser.	Group work: Discuss the advantages and system requirements. The meaning of simple terminologies related to internet. e.g.: ISP, URL, WWW, etc. Internet Vs Intranet. Demonstration: Functions of a web browser and components of its window. Use of search engines. Hands-on: Browsing internet and search for some specified information. Presenting the findings. Topical-Project: Provide a suitable topic, on which students may collect information over the Internet and produce a report or presentation. Suggested Topics: Endangered Animals, Planets and their properties, Volcanism, etc.	• use a web browser. • use search engines. • identify the advantages and disadvantages of using Internet.	B11: (Pg: 25- 27)	Observation Homework: Suggested Exercise: B8(Pg 31-34) Homework: Suggested Exercise: B8(Pg 35-40)

COMPUTER STUDIES **SCHEME OF WORK** **YEAR 7**

Duration (no of weeks)	Topic	Learning Objectives	Learning Activities	Learning outcome (At the end of the lessons, students will be able to ...)	Resources	Assessment
3 weeks	E-mail: Technical Terms E-mail: Advantages, and system requirements E-mail: Disadvantages and dangers of virus	Be able to identify and experience various types of email applications. Be able to classify the advantages of e-mail systems. Be able to identify the dangers and security measures for unsolicited e-mails and messages in attachments.	Group Work: The meaning of simple terminologies related to e-mail. e.g.: Scam, Phishing, Spam, Webmail, etc. Discuss advantages and system requirements. Compose a simple mail, and ask students to check how speed is really an advantage. Showing samples of clips mentioning about dangers of virus infected computer through email's attachment. Demonstration: Functions and components of an email: • How does electronic mail work? • Components of an e-mail. • Components of an electronic mail addressee such as To:, Cc: and Bcc.	• use an electronic mail application. • state the meaning of simple terminologies related to email. • identify the advantages and disadvantages of using email.	B6: (Pg 30) B11: (Pg 22-24)	Observation Homework: Suggested Exercise: B9(Pg 25-27)

Duration (no of weeks)	Topic	Learning Objectives	Learning Activities	Learning outcome (At the end of the lessons, students will be able to ...)	Resources	Assessment
	E-mail: Topical Projects		Hands-on: Create, send and receive emails with attached files (documents, images, sound). Topical-Project: Students ought to produce a user documentation* for activity like 'How to attach files to an email' And/Or 'How to open an email attachment'. • user documentation* is a simple guide which provides helps to users.. e.g: How to make attachment OR How to send a mail to many recipients.		Online Resource: E-mail (Appendix 6)	Homework: Suggested Exercise: B9(Pg 29) Topical-Project

APPENDIX 1

Survey Form

1. What is the type of the computer you are using?
   - ☐ desktop
   - ☐ laptop
   - ☐ Personal Digital Assistant
   - ☐ Others, please specify _____

2. What operating system is used in your computer?
   - ☐ Windows 98
   - ☐ Windows ME
   - ☐ Windows XP Home Edition
   - ☐ Windows XP Professional Edition
   - ☐ Windows Vista
   - ☐ MAC OS
   - ☐ Others, please specify _____

3. Are the following devices available in your computer?
   - ☐ Floppy disk drive
   - ☐ CDROM drive / CDRW drive
   - ☐ DVDROM drive / DVDRW drive
   - ☐ Card reader
   - ☐ Others, please specify _____

4. Have you ever used the following applications?
   (you may tick more than one).
   - ☐ Word processing packages
   - ☐ Spreadsheet packages
   - ☐ Database packages
   - ☐ Graphic packages
   - ☐ Presentation graphic packages
   - ☐ Others, please specify _____

5. How many bytes does your computer hard disk have? _____ Gigabytes / Terabytes

6. What is the size of the RAM? _____ Megabytes / Gigabytes

7. Have you heard and use the following computer accessories/peripherals?
   - ☐ Scanner
   - ☐ Microphone
   - ☐ Speaker
   - ☐ Digital camera
   - ☐ Web camera
   - ☐ Printer
   - ☐ Others, please specify _____

APPENDIX 2

SUGGESTED CHECK LIST ON MICROSOFT PAINT USAGE:

Suggested check list for hands-on activities		Tick here
Creating a new graphic file		
	Open a graphics application	
	Save graphics with a different name and in a different folder	
Graphics tools		
	Free form select	
	Select	
	Eraser/color eraser	
	Pick color	
	Pencil	
	Airbrush	
	Line	
	Draw shapes e.g. Rectangle, etc	
	Fill with color	
	Magnifier	
	Brush	
	Text	
	Curve	
Using images tools		
	Flip/rotate	
	Sketch/Skew	
	Invert Colors	
	Attributes	
	Clear Images	
Using editing objects		
	Move	
	Resize	
	Copy and paste	
	Duplicate or clone	
	Group and ungroup	

APPENDIX 3

SUGGESTED CHECK LIST ON MICROSOFT WORD USAGE:

Suggested tasks for hands-on activities:		Tick here
Create a new document		
	Open a word processing application	
	Save documents with a different name and in a different folder	
	Blocking text: cut, copy and paste command	
	Switch between document windows and other open window.	
	2 types of editing mode: overwrite & insert	
Character formatting tasks		
	Font size & types;	
	Font styles: bold, italic, underline, subscript & superscript	
	Font colour	
Paragraph formatting tasks		
	Text alignment : left, right, justified and centered	
	Line spacing: single, double and multiple spacing	
Other formatting tasks		
	Bullet and numbered list	
	Box borders and shadings	
Editing tools		
	Page breaks	
	Page numbering	
	Headers and footers	
Language tools		
	Spell check	
	Grammar check	
	Thesaurus	
	Add new words into the user dictionary	

APPENDIX 4

Online Resources, Games & News

Input, Process & Output
http://www.bbc.co.uk/schools/gcsebitesize/ict/system/0ictsystemsrev4.shtml

Parts of a Computer
http://www.teach-ict.com/gcse/hardware/parts/students/shome_parts.htm

MS Paint Tutorials
http://www.lkwdpl.org/classes/MSPaint/paint.html
http://www.lesley.edu/faculty/ahunt/MSPttutr.htm
http://www.baycongroup.com/paint_shop_pro/tutorials.htm

Input Devices
http://www.teach-ict.com/gcse/hardware/input/students/shome_input.htm
http://www.bbc.co.uk/schools/gcsebitesize/ict/hardware/0inputandoutputdevicesrev2.shtml

Output Devices
http://www.teach-ict.com/gcse/hardware/output/students/shome_output.htm
http://www.bbc.co.uk/schools/gcsebitesize/ict/hardware/0inputandoutputdevicesrev3.shtml

Storage Devices
http://www.teach-ict.com/gcse/hardware/storage/students/shome_storage.htm

Health & safety
http://www.teach-ict.com/gcse/theory/healthsafety/student/shome_h&s.htm

Windows Basics
http://www.jegsworks.com/Lessons/win/basics/index.html
http://www.baycongroup.com/windows_xp/index.htm

APPENDIX 5

Online Resources, Games & News

Mac Finder Windows & Basics
http://www.macoptions.com/os85/index.html

File Management
http://www.jegsworks.com/Lessons/win/filesandfolders/index.html

Bits & Bytes
http://www.teach-ict.com/gcse/hardware/bits_and_bytes/students/s_bitsandbytes.htm

Computer Memory
http://www.howstuffworks.com/computer-memory1.htm

CPU
http://www.teach-ict.com/gcse/hardware/parts/miniweb/CPU.htm

Types of Computers
http://www.teach-ict.com/gcse/hardware/types/students/shome_types.htm

Types of Software
http://www.teach-ict.com/gcse/software/software/students/shome_sw_general.htm

Operating System
http://www.teach-ict.com/gcse/software/opsystems/students/shome_os.htm

Application Software

http://www.teach-ict.com/gcse/software/software/miniweb/applications.htm

APPENDIX 6

Online Resources, Games & News

MS Word Tutorial
http://www.uwstout.edu/training/MSTutorials/word.htm
http://www.teach-ict.com/gcse/software/word/student/shome_wp.htm
http://office.microsoft.com/en-us/training/CR061958171033.aspx

Automation
http://en.wikipedia.org/wiki/Automation

Robotics
http://www.robotics.com/robots.html#questions
http://www.teach-ict.com/gcse/software/robotics/students/shome_robotics.htm

CAM
http://www.teach-ict.com/gcse/software/cadcam/students/shome_cadcam.htm

E-mail
http://www.teach-ict.com/gcse/theory/communication/miniweb/pg8.htm

Video Conferencing
http://www.webex.com/overview/video-conferencing.html

Suggested Book List

Book Ref	Book Author	Book Title	Publisher	Year
B1.	G.S Rao et al	An Introduction To Information Technology 1	Federal Publication	2001
B2.	G.S Rao et al	An Introduction To Information Technology 2	Federal Publication	2002
B3.	G.S.Rao and A.K.Rao	An introduction to Information Technology workbook 1	Marshall Cavendish Education	2001
B4.	G.S.Rao and A.K.Rao	An introduction to Information Technology workbook 2	Marshall Cavendish Education	2003
B5.	Jonathan Chan	COMPUTER APPLICATIONS SECONDARY 1	Pearson Longman	2007
B6.	Jonathan Chan	COMPUTER APPLICATIONS SECONDARY 2	Pearson Longman	2007
B7.	Jonathan Chan, Choy Wai Tse Kelly	COMPUTER APPLICATIONS Upper Secondary	Pearson Longman	2007
B8.	Jonathan Chan	Computer Applications, Secondary 1 Workbook	Pearson Longman	2007
B9.	Jonathan Chan, Choy Tse Kelly	Computer Applications, Secondary 2 Workbook	Pearson Longman	2007
B10.	Jonathan Chan	Computer Applications, Secondary 3 Workbook	Pearson Longman	2007
B11	Charley Darbishire et al	CGP KS2 ICT : The Study Book	Coordination Group Publications	2003
B12	Colin Harber – Stuart et al	GCSE ICT : The Revision Guide	Coordination Group Publications	2005
B13	Eric Deeson	The Essentials of GCSE ICT	Lonsdale publisher	2005
B14	Sean O'Byrne	GCSE SUCCESS : Visual Revision Guide ICT	Letts Publications	2001
B15	Sean O'Byrne	GCSE SUCCESS : Visual Revision Guide ICT,Questions & Answers	Letts Publications	2003
B16	Eric Deeson	The Essentials of GCSE ICT, Student Workbook	Lonsdale publisher	2005
B17	JPK, Negara Brunei Darussalam	Introductory Computer Studies for Brunei Darussalam, Menengah 1 (Revised Edition)	Oxfod University Press	1999
B18	JPK, Negara Brunei Darussalam	Introductory Computer Studies for Brunei Darussalam, Menengah 2	Oxfod University Press	1995
B19	JPK, Negara Brunei Darussalam	Introductory Computer Studies for Brunei Darussalam, Menengah 3	Oxfod University Press	1996
B20	Stephen Doyle	Information Systems for you	Stanley Thornes	1995
B21	Tony Rackham	GCSE Information Technology	Letts Educational	1995
B22	G.S. Rao et al	Computer Applications for Secondary Four, 4A	Pearson Longman	2002
B23	Stephen Doyle	Applied ICT GCSE	Nelson Thornes	2002