

COMPUTER STUDIES

SCHEME OF WORK

YEAR 8

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	Practice with Word Processing	<p>Be able to format documents (margins & indents)</p> <p>Be able to use Auto Text, find & replace features.</p> <p>Be able to insert objects (pictures and tables).</p>	<p>Hands-on:</p> <ul style="list-style-type: none"> Produce a brochure / flyer about computers. Create a class timetable. 	<ul style="list-style-type: none"> create a document with suitable format (including margin & indentation) use AutoText use find and replace features. insert pictures from clip arts and files. create, edit and format a table <p>Suggested MS Word check list (Appendix 1)</p>	<p>B2: (Pg 40-41, 46-47) B5: (Pg 76-78, 104-107) B6: (Pg 72-76)</p> <p>Online Resource: MS Word (Appendix 10)</p>	<p>Suggested Exercises</p> <p>B4: (Pg 32, 36)</p> <p>B8: (Pg 86)</p>
3 weeks	Graphics: Microsoft Publisher	<p>Be able to create a publication using pre-designed layout.</p> <p>Be able to import images from scanner or digital camera and incorporate them into the design.</p>	<p>Hands-on:</p> <ul style="list-style-type: none"> To produce a birthday card, award certificate, banner, brochure etc. Save your work. 	<ul style="list-style-type: none"> create, save, open and close MS Publisher application. save file with a different name, type and in a different folder. import pictures from Clip-art. Import photos from Digital Camera or scanner. create different designs using the pre-designed layouts and graphics. <p>Suggested MS Publisher check list (Appendix 2)</p>	<p>Online Resource: Microsoft Publisher (Appendix 10)</p>	<p>Suggested Exercises</p> <p>B22: (pg. 20 – 24), 32-36, 70-72</p>

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	Graphics: Any CAD software available	<ul style="list-style-type: none"> Able to develop and format simple pre-designed graphics. 	<p>Demonstration: Creating a 3D Home Architect project. (or any CAD software available)</p> <p>Hands-on : Designing a project like a real house, Build a 2-or 3-story house.</p>	<ul style="list-style-type: none"> create, save, open and close 3D Home Architect application. save file with a different name, type and in a different folder. create different designs using the pre-designed layouts and graphics. <p>Suggested 3D Home check list (Appendix 3)</p>	Help files from 3D Home Architect application.	
2 weeks	Computer Viruses	Be able to identify the different kinds of viruses, their impact to a computer system and their prevention methods.	<p>Demonstration:</p> <ul style="list-style-type: none"> Show web- links with evidence of damages caused by virus infection. Slide-show of different type of virus, sources of virus and prevention methods. <p>Hands-on:</p> <ul style="list-style-type: none"> How to use an anti-virus software? How to update virus definition files of an antivirus software? 	<ul style="list-style-type: none"> differentiate between virus, worm and Trojan horse. provide examples of computer viruses and damages caused by them. e.g. Melissa virus, I Love You virus, etc. provide examples of Worms. e.g. My Doom worm. provide examples of Trojan horse. provide sources of virus infections (Appendix 8). suggest various virus protection measures (Appendix 9). 	<p>B2: (Pg 13-17) B7: (Pg 139,146-148)</p> <p>Online Resources: Computer viruses News (Appendix 11)</p>	<p>Suggested Exercises: B2: (Pg 20) B4: (Pg 10-11) On-line Quiz (Appendix 11.)</p>

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	Spreadsheets: Practice with MS Excel	Be able to create a worksheet, showing ability to format data in cells, including using automatic formatting and setting tools.	Hands-on: <ul style="list-style-type: none"> Produce an expenditure list with borders and shading and save it. Open the saved list, edit it and save it again with the same name and with different names (in different folders). 	<ul style="list-style-type: none"> open, create, save and close workbooks. enter text and numbers. format text and numbers. apply borders and shading. handle worksheets. Manipulate range of cells. differentiate the types of data found in spreadsheets. <p>(Appendix 4)</p>	B6: (Pg 152-154, 157-158) B2: (Pg 59-66, 69-76) Online resource: Excel Tutorial (Appendix 12)	Homework Suggested Exercises B4: (Pg 44-55) B9: (Pg 141-145)
	Spreadsheets: Formulas & Functions	Be able to practice and handle formulas and functions for calculations and comparisons.	Hands-on: <ul style="list-style-type: none"> Produce a class mark sheet and save it (Include Attendance & Ranking). Produce a budget for an educational visit to a neighbouring country. 	<ul style="list-style-type: none"> insert and modify formulas. recognize common errors made when using formulas and functions. <p>(Appendix 5)</p>	B2: (Pg 66-68)	Suggested exercise: B4: (Pg 46-51) B9: (Pg 146-153)

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	Spreadsheets: Sorting Data	Be able to organize data using sort.	Hands-on: <ul style="list-style-type: none"> Retrieve the mark sheet produced earlier and sort it. 	<ul style="list-style-type: none"> sort data in any order. sort data in multiple columns. (Appendix 5)	B2: (Pg 77)	Homework
	Spreadsheets: Creating and Formatting Charts	Be able to create, edit and format some features in a chart.	Hands-on: <ul style="list-style-type: none"> Produce a chart on population growth of Brunei Darussalam. Produce a chart showing the ratio on school club members. 	<ul style="list-style-type: none"> create, insert, modify, label and format charts in a worksheet. duplicate, move charts within a worksheet, between open spreadsheets. (Appendix 5)	B2: (Pg 77-79)	Homework B4: (Pg 56-61) B10 (Pg 141-161)
	Spreadsheets: Page Preview and Printing	Be able to produce outputs or hard copies.	Hands-on: <ul style="list-style-type: none"> Retrieve some files created earlier then do formatting tasks. Apply page setup properties. Print the files. 	<ul style="list-style-type: none"> apply proper formatting and page setup features. preview a worksheet. print a worksheet. (Appendix 5)	B2: (Pg 79-80)	Suggested exercises: B4: (Pg 63-66) Progress test

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	Information	Be able to use computers to collect, organize, and evaluate information.	<p>Group Work: Simulate on running a supermarket.</p> <p>Field Trip: Visit to a supermarket or a bank.</p>	<ul style="list-style-type: none"> state the importance of information and its use in government and business organizations. recognize that data can be easily stored, organized, retrieved and processed using the computer. recognize some of the uses of large-scale computer applications. 	<p>B2: (Pg 95)</p> <p>B6: (Pg 48 – 58)</p>	<p>Suggested exercises</p> <p>B9: (Pg 35, 46 – 47, 49-51)</p>
1 week	Health Issues	Be able to identify potential dangers posed by computers on our health.	<p>Demonstration: Show pictures of ergonomically-designed equipments.</p> <p>Assignment : Collect information on health hazards caused by unused / old computer equipment.</p>	<ul style="list-style-type: none"> list some health problems caused by using computers. practice good habits to maintain good health and create good working environment. <p>(Appendix 8)</p>	<p>B14: (Pg 76 – 77)</p> <p>B2: (Pg.102)</p> <p>Online Resource: Health and Safety (Appendix 10)</p>	
1 week	Environmental Issues	To identify potential dangers posed by computers on the environment.	<p>Group Work : Collect information on ways to minimize environmental problems caused by computers.</p> <p>Field Trip:</p>	<ul style="list-style-type: none"> explain briefly how computers can give rise to pollution and environmental problems. help raise consciousness about protecting our environment through the 4Rs. (Reduce, Recycle, Repair, Reuse). 	<p>B7: (Pg 164 – 165)</p> <p>B2: (Pg 101)</p>	<p>Suggested exercises</p> <p>B4: (Pg 72-75)</p>

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	Effect on employment	Be able to identify the impact of computers on employment.	Group Work: To explore the current employment trends.	<ul style="list-style-type: none"> explain the effects of computers on employment. Identify different types of new working styles: (Internet banking, e-Commerce, tele-commuting, etc.). explain the benefits of new working styles. <p>(Appendix 8)</p>	B2: (Pg 104 – 105) B14: (Pg 72 – 73) Online Resources: Social Impact (Appendix 12)	Suggested exercises B2: (Pg 110) B15 (Pg 68-69)
1 week	Changes in Lifestyles	To identify the impact of computers on our lifestyles.	Assignment: <ul style="list-style-type: none"> Searching for information on the Internet about “Moneo” – The Smart card electronic wallet Collect information on various forms of non- cash payments in Brunei Darussalam. Demonstration: Looking at example on the Internet for e-commerce. e.g. www.amazon.com	<ul style="list-style-type: none"> explain what a cashless society is. explain why electronic transactions are popular. identify the various forms of non-cash payments. <p>(Appendix 9)</p>	B7: (Pg 160-163) B2: (Pg 106 – 109) Online resource: Lifestyles (Appendix 12)	Suggested exercises B4 (Pg 75-77) B15: (Pg 70-71)

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	Computers at Home	To recognize how embedded computers are used at homes.	<p>Assignment:</p> <ul style="list-style-type: none"> Collect information on examples of household appliances with embedded computers. Look for pictures of home Entertainment. 	<ul style="list-style-type: none"> identify embedded computers that are installed in household appliances and devices. e.g. washing machine, a refrigerator, digital cameras, electronic games, etc. identify benefits that can be brought about by using home computer. 	B7: (Pg 98-100) Online Resource: Lifestyle2 (Appendix 12)	Suggested exercises B8: (Pg 25)
2 weeks	Multimedia	Be able to identify features in a multimedia system. Be able to make use the recorded sound or voices to be incorporated in a multimedia presentation.	<p>Demonstration:</p> <ul style="list-style-type: none"> Record your voice. Record some human-made sound. Mix the recorded sound and make some changes to the tempo, frequency and speed. 	<ul style="list-style-type: none"> state the meaning of the term multimedia. identify the features in a multimedia system. list all the necessary peripherals and application software of a multimedia system. state the function of C.A.L as a tool in a multimedia interactive educational software. identify the advantages of using C.A.L to use narration to record voice. (Appendix 6)	B2: (Pg 116 – 118) B6: (Pg 128 – 137)	Suggested exercise: B2: (Pg 119)

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 MS PowerPoint	Be able to develop and format simple presentations.	Hands-on: <ul style="list-style-type: none"> • Create a presentation containing 5-6 slides. 	<ul style="list-style-type: none"> • create, save, open and close a presentation. • enter and format text. • format slides. • switch between open presentations. • use available help functions. <p>(Appendix 6)</p>	B1: (Pg 123 - 131) Online Resource: PowerPoint Tutorial (Appendix 12)	Homework
		Be able to identify the general features and make use them for a multimedia applications.	Hands-on: <ul style="list-style-type: none"> • Open a presentation file and incorporated sound or video and animated images. • Incorporate a recorded voice into a presentation file. • Hyperlink slides. 	<ul style="list-style-type: none"> • make use of some interesting elements or features in a multimedia presentation: video, sound and animation. • hyperlink slides to other slides, other presentation files or different format files or a website. <p>(Appendix 7)</p>	B5: (Pg 137-149) B5: (Pg 155 – 160)	Homework
1 week	Movie maker application package	Be able to create a simple storyboard using a movie maker program.	Demonstration: <ul style="list-style-type: none"> • Produce a simple movie clips. 	<ul style="list-style-type: none"> • create save, open a movie using still pictures or video clips. • make use of the task button. <p>(Appendix 7)</p>	B5: (Pg 150 – 154) B6: (Pg 144 – 150)	Homework Progress test

SUGGESTED CHECK LIST ON MICROSOFT WORD USAGE:

Suggested tasks for hands-on activities:		Tick here
More word basic features		
	Auto Text	
	Find and Replace	
More formatting tasks		
	Indentation	
	First-Line Indent	
	Hanging Indent	
	Setting tabs	
	Multi-column layout	
Insert pictures		
	Insert pictures from clip arts	
	Insert pictures from files	
Designing a table		
	Specify the rows and columns	
	Enter data in the table	
	Insert new row or column	
	Merge a range of cells	
	Delete column and row	
	Apply shading in the table's cells.	
	Modify column width and row height	
	Modify cell border with different style and colors.	

SUGGESTED CHECK LIST ON MICROSOFT PUBLISHER USAGE:

Suggested check list for hands-on activities		Tick here
Creating a new file		
	Open a graphics application	
	Save graphics with a different name and in a different folder	
Inserting Picture / Autoshapes		
Editing scanned Picture Graphics tools		
	Shading	
	Cropping	
Improving appearance		
	Borders	
	Font scheme	
	Color scheme	
Design a card and printing hard copies		
	Specifying page setup e.g. Publication type, paper orientation, paper size.	
	Input text	
	Import text or pictures into a card	
	Number of copies	

SUGGESTED CHECK LIST ON MICROSOFT 3D Home USAGE:

Suggested check list for hands-on activities		Tick here
Creating a new file		
	Open a graphics application	
	Save graphics with a different name and in a different folder	
Graphics tools		
	Walls	
	Windows	
	Base cabinet	
	Fixture library	
	Furniture	
	Stairs	
	Roofs	
Use text and dimension to improve the appearance of a objects		
Design a simple house		
	Draw the walls (plot 4 corners)	
	Design windows (standard window, bay window, box window, 5 sections window)	
	Create cabinet (base cabinet, wall cabinet, full height, soffit, shelf/rod)	
	Install fixtures (bathroom fixture, sinks, appliances, utility, misc. : water cooler, post lamp)	
	Install stairs	
	Select furniture for each room (tables, seating, bedroom, interior design, plants, etc.)	
	Design roofs for the house	
Use camera plan to view the house.		
	Wall elevation	
	Cross section	

SUGGESTED CHECK LIST ON SPREADSHEET PACKAGE USAGE:

Suggested check list for hands-on activities:		Tick here
Open, create, save and close workbooks		
	Open a spreadsheet application.	
	Create a new workbook using default template.	
	Entering data items: text; numeric values; formulas / function	
	Save a workbook to a location on a drive.	
	Save a workbook using a different name or file type.	
Worksheet manipulation		
	Handle worksheet: insert new, move, rename & delete	
	Freeze and unfreeze column and/or row titles.	
	Switch between worksheets and open spreadsheets.	
Enter text and numbers		
	Select cells and enter data	
	Change, copy, move and delete cell entry	
	Cells alignment (item types) by default	
	Enter numbers as labels or value	
	Autofill	
Select appropriate range of cells manipulation		
	Select a cell, range of adjacent cells and non-adjacent cells.	
	Select a row, range of adjacent rows and non-adjacent rows.	
	Select a column, range of adjacent columns and non-adjacent .	
	Select entire worksheet.	
Cell Formatting tasks		
	Adjust standard column width	
	Adjust standard row height	
	Adjust text alignment and orientation	
	Format numbers: currency, date/time and percentage.	
	Autoformat	

SUGGESTED CHECK LIST ON SPREADSHEET PACKAGE USAGE:

Suggested check list for hands-on activities:		Tick here
Insert and modify arithmetic formulas		
	Addition, subtraction, multiplication and division	
	SUM, AVERAGE, MINIMUM, MAXIMUM, COUNTS AND AUTOSUM	
	Generate formulas using cell referencing: relative, mixed, absolute.	
Create and handle charts		
	Create different types of charts	
	Change the colours in a chart: background, lines, columns, bars and pie slices.	
	Add / remove a title, label to / from the chart.	
Organize data using sort		
	Sort by one column using a basic descending or ascending sort.	
	Sort by multiple columns	
Page settings and printing hard copies.		
	Changing page size	
	Page: orientation (portrait and landscape)	
	Adjusting margin: top, bottom, left and right	
	Creating headers and footers: text	
	Showing sheet: gridlines	
	Inserting other details like: filename, date/time, page numbering ...	
	Set page break	
	Print area: selection, active sheet, entire workbook, selected chart	
	Number of copies	

SUGGESTED CHECKLIST ON MULTIMEDIA & PRESENTATION APPLICATION PACKAGES.

Suggested check list for hands-on activities		Tick Here
Sound recording software:		
	Open the application: program → accessories → entertainment → sound recorder	
	Identify the simple buttons for recording and play-back	
	Demonstrate the use of other features like: mixing sound, changing the tempo and the frequency of the recorded voice.	
	Save the recorded voice for later use in the Microsoft power point application.	
	Closing the application	
Presentation software: start creating		
	Open, editing, close and save a multimedia application.	
	Create a presentation by using pre-designed layout and templates.	
	Use the undo and redo commands	
	Save a file under a different file type eg. 'slide show' file type	
Formatting text		
	Use different case, build shadows and colours.	
	Try different text alignments: left, right, centre and justified.	
Format the paragraph and slides		
	Adjust line spacing before / after bulleted and numbered point	
	Change between the style of bullets, numbers in a list from built-in standard options	
	Apply the background templates or import other wallpapers.	

SUGGESTED CHECKLIST ON MULTIMEDIA & PRESENTATION APPLICATION PACKAGES.

Suggested check list for hands-on activities		Tick Here
Other features / elements to be incorporated		
	Clip arts, word art, animation or animated clip art	
	Sound or music	
	Slide transitions	
	Incorporate timing features during a slide show presentation	
Hyperlink buttons		
	Hyperlink built- in buttons / user-made buttons	
	Hyperlink to other presentation file or other files	
	Hyperlink to external slides from other presentation file	
	Linking a slide to other files like a movie file, a webpage ...	
Movie Maker application package:		
	How to import pictures into the collection frame	
	Show two viewing mode of media: storyboard and timeline	
	Produce (drag) clips from collection to the storyboard /timeline.	
	Incorporate audio and music effects	
Making use of the TASK button		
	Video effects.	
	Video transition.	
Designing the movie clips with titles or credits (Enrichments)		
	Titles at the beginning / before / after selected slides shows	
	Add credits at the end of the movie	
	Saving video clips in different movie formats: CD format, e-mail; web version; DV format and simply to the computer movie version.	

SUGGESTED CHECK LIST ON SOCIAL ECONOMICS AND IMPLICATIONS:

Suggested check list on Social and Economic implications:		Tick here
Automation trends in modern offices.		
	Word processors	
	Spreadsheets	
	Databases	
	E-mail	
Health problems which can be linked with using a computer.		
	RSI (repetitive strain injury)	
	Eye strain cause by screen glare	
	Back problems associated with poor seating or bad posture	
	Injuries to wrists cause by prolonged typing	
Practices to help create good working environment.		
	Appropriate positioning of monitors, keyboards and adjustable chairs	
	Use of a mouse pat	
	Use of a monitor filter	
	Use of a wrist support	
	Provision of adequate lighting and ventilation	
Pollution problems and environmental problems caused by computers.		
	Manufacture of computers and peripherals	
	Expendable computer parts, e.g. Printer cartridges	
	Disposal of unwanted computers and peripherals	
	Cutting down of trees	
Advantages of tele-commuting (tele-officing)		
	Reduce or no commuting time	
	Greater ability to focus on one task	
	More flexibility in schedules	
	Reduce company space requirement	

APPENDIX 9

Suggested check list on Social and Economic implications:		Tick here
Why electronic transactions are popular.		
	Cost saving	
	Convenience	
	Security	
Forms of non-cash payments.		
	Credit and debit cards	
	Prepayment cards	
	ATMs	
	Smart cards	
	E-commerce	

Online Resources, Games & News

MS Word Tutorials

<http://www.baycongroup.com/wlesson0.htm>

<http://www.uwstout.edu/training/MSTutorials/word.htm>

<http://office.microsoft.com/en-us/training/CR061958171033.aspx>

MS Publisher Tutorials

<http://www.officetutorials.com/publishertutorials.htm>

<http://support.churchserve.com/tutorials/publisher/>

<http://office.microsoft.com/en-us/training/CR061832741033.aspx>

Computer Crimes

http://www.teach-ict.com/gcse/theory/crime/student/shome_crime.htm

<http://www.teach-ict.com/gcse/theory/crime/miniweb/index.htm> (Introduction)

<http://www.teach-ict.com/gcse/theory/crime/miniweb/pg5.htm> (Piracy)

<http://www.teach-ict.com/gcse/theory/crime/miniweb/pg7.htm> (Hackers)

http://www.teach-ict.com/gcse/theory/hacking/student/shome_hacking.htm (Hacking)

Sound file on Network security and Video on Phishing:

<http://www.ictgcse.com/?act=podcast>

News on computer crimes:

http://www.teach-ict.com/news/news_crime.htm

http://www.teach-ict.com/news/news_hacking.htm

On-line Games on computer crimes:

http://www.teach-ict.com/xml/finished/4706/word_puzzle.htm

Online Resources, Games & News

Computer Viruses

http://www.teach-ict.com/gcse/theory/virus/student/shome_virus.htm

News on computer viruses:

http://www.teach-ict.com/news/news_virus.htm

On-line Quiz on computer viruses

http://www.teach-ict.com/gcse/theory/virus/student/s_virus_quiz.htm

Video on data privacy

<http://www.ictgcse.com/?act=podcast#vid>

Data Protection

http://www.teach-ict.com/gcse/theory/protectingdata/student/shome_protectdata.htm

News on data security

http://www.teach-ict.com/news/news_dpa.htm

Online Resources, Games & News

Excel Tutorial

<http://www.uwstout.edu/training/MSTutorials/excel.htm>

<http://office.microsoft.com/en-us/training/CR061831141033.aspx>

PowerPoint Tutorial

<http://www.uwstout.edu/training/MSTutorials/pwrpnt.htm>

<http://office.microsoft.com/en-us/training/CR061832731033.aspx>

Robotics

http://www.teach-ict.com/gcse/software/robotics/students/shome_robotics.htm

Health and Safety

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

Social Impact

http://www.teach-ict.com/gcse/theory/social/student/shome_society.htm

http://www.teach-ict.com/gcse/theory/work_and_employment/student/shome_work.htm

<http://www.bbc.co.uk/gcsebitesize/ict/implications/2workpatternsrev4.shtml>

Lifestyles

<http://www.bbc.co.uk/schools/gcsebitesize/ict/implications/1lifestylerev4.shtml>

<http://www.bbc.co.uk/schools/gcsebitesize/ict/implications/1lifestylerev2.shtml>