

Wah Yan College Kowloon
F.4 ICT Scheme of Work (2015-2016)

Textbook	1. NSS Information and Communication Technology Book 1 (Longman) 2. NSS Information and Communication Technology Book 2 (Longman)
Other Resources	Internet

SL: Scheduled number of lessons

AL: Actual number of lessons

School Term	Weeks	Topics	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Values#
First Term (1/9/2015- 2/1/2016, Weeks 1 to 18)	2	1.1 Basic Concepts of Input-Process- Output Cycle 1.2 Use of Stored Programs	Recognize the Input-Process-Output cycle. Recognize the importance and applications of stored programs.	4	Activity 1: More daily life example involving the Input-Process-Output cycle (p.5) Activity 2: Controlling a robot arm (p.7-9)		II, III
	3	1.3 Difference between Data and Information 1.4 Types of Data 1.5 Components of an Information System	Realize the difference between data and information, and identify different types of data as image, audio, video and text. Identify and examine the components of an information system.	4			II, III
	4	1.6 Information Processes 1.7 Information Technology and the Information Age 2.1 Data Input and Sources of Error 2.2 Data Control	Recognize the processes in an information life cycle. Study a real-life example of information processing. Explain what the Information Age is and its importance on fostering a knowledge-based society. Describe the data input methods and sources of error. Describe how data validation and parity check can detect data errors. Explain how verification and validation can prevent errors in the process of data entry.	4	Activity 1: Signing up for Yahoo! (p.48-50)		II, III

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	5	2.3 Data Hierarchy 2.4 Database Management System Software (DBMS) 2.5 File Access Modes	Identify data, fields, records, tables and databases in the hierarchical organization of data. Explain how records can be organized, stored and retrieved. Describe the advantages, disadvantages and applications of direct access and sequential access.	3	Activity 3: Creating a database by using Microsoft Access (p.58-59)		III
	6	3.1 Denary, Binary and Hexadecimal Number Systems 3.2 Number System Conversion	Recognize the representation of different number systems. Recognize the conversion of different number systems.	4	Activity 1: Using the Windows Calculator for quick decimal to binary conversions (p.83-84)		III
	7	3.3 Number Representation in Computer Systems 3.4 Addition and Subtraction of Different Number Representations 3.5 Character Coding Systems	Describe how binary numbers are stored and manipulated in a computer. Study the addition and subtraction of different number systems. Recognize different types of character coding systems.	4	Activity 4: Using Excel to do number system conversion (p.98-99)		
	8	4.1 Digital Multimedia Elements 4.2 Analogue Data and Digital Data	Describe common graphics, audio and video file formats. Compare the characteristics of common graphics, audio and video. Identify the characteristics of analogue data and digital data. Describe common applications of conversions of analogue data to digital data.	3	Activity 1: Learning more about JPEG and PNG (p.113) Activity 2: Comparing bitmaps and vector graphics (p.115) Activity 3: Investigating the sound quality of different audio file formats (p.123-124) Activity 4: Investigating the effect of file compression on image quality (p.125-126) Activity 5: Investigating the effect of file compression on the video quality (p.127-128)		

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	9	5.1 Basics of Office Automation 5.2 Software and Hardware for Office Automation 5.3 Basic Activities in Office Automation 5.4 Effectiveness of Office Automation	Recognize the basic concepts of office automation. Describe the common types of software and hardware used in office automation. Recognize the basic activities in office automation. Understand the factors affecting the effectiveness of office automation.	4	Activity 1: Customizing the Quick Access Toolbar in Microsoft Office (p.144-145)		I, III
	10	6.1 Introduction to Word Processors 6.2 Text Editing	Understand the basic operation of word processing in the working environment of Microsoft Word. Be familiar with the techniques of editing a document through editing commands.	4	Activity 1: Replacing the text 'hardware technology' (p.172)		
	11	6.3 Formatting Features	Become familiar with the skills to polish the appearance of a document through the formatting features.	4	Activity 2: Producing your resume (p.179-180) Activity 3: Producing an advertising flyer (p.185-186) Activity 4: Producing a newsletter (p.190-191)		II
	12	6.4 Advanced Word Processing Features	Recognize advanced word processing features.	4	Activity 5: Creating a table of contents and index for a project (p.197-198) Activity 6: Creating mailing labels (p.199-200)		II
	13	7.1 Introduction to Spreadsheets 7.2 Basic Operations of Microsoft Excel 2007	Understand the basic concepts of a spreadsheet. Be familiar with the basic operations of spreadsheet software.	4	Activity 1: Creating your first spreadsheet (p.218-221) Activity 2: Filling cells with AutoFill function (p.224-226)		
	14	7.3 Formula and Cell Reference 7.4 Functions	Recognize common formulae used in a spreadsheet. Recognize different types of cell reference. Use the common functions for calculation.	4	Activity 3: Creating a profit analysis (p.230-231) Activity 4: Building a marketing plan (p.241)		II

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	15 – 16	Examination					
	17 – 18	Christmas Holiday					
Second Term (3/1/2016-15/7/2016, Weeks 19 to 46)	19	7.5 Creating Charts 7.6 Data Manipulation Techniques	Recognize the way to create a suitable chart to present data. Acquire the data manipulation techniques using table.	4	Activity 5: Creating a simple chart (p.243-245) Activity 6: Creating a structured table (p.246-248) Activity 7: Filtering records in a table (p.251-253)		II
	20	7.7 Data Analysis	Recognize a spreadsheet which can be used to carry out data analysis.	4	Activity 8: Using the Scenario Manager to analyze a budget (p.255-259)		II
	21	7.7 Data Analysis	Recognize a spreadsheet which can be used to carry out data analysis.	3	Activity 9: Creating a summary report using pivot table (p.261-263) Activity 10: Filtering information in a pivot table (p.263-265) Activity 11: Creating a pivot chart (p.269-270)		II
	22	8.1 Database Concept 8.2 Using the Database Management System (DBMS) 8.3 Microsoft Access	Recognize the advancement of information management. Identify different database applications. Know more about designing a database, key field and input mask. Identify different database objects in Microsoft Access. Be familiar with basic operations of a table in Microsoft Access.	5	Activity 1: Basic operations of a table (p.289-295)		I, II
	23	8.3 Microsoft Access 8.4 Forms	Know more about data sorting and filtering. Recognize the functions of forms. Become familiar with the Form Wizard.	5	Activity 3: Filtering records (p.296-297) Activity 4: Using the Form Wizard (p.298-299) Activity 5: Sorting and filtering records in a form (p.299-301)		II
	24	Lunar New Year Holiday					

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	25	8.4 Reports	Recognize the functions of reports. Become familiar with the Report Wizard.	2	Activity 6: Using the Report Wizard (p.302-304)		II
	26	8.5 Queries	Recognize the functions of queries. Become familiar with the SQL view.	4	Activity 7: Using SQL View to create a query (p.305-309)		II
	27	9.1 The Need for Integrating Data among Different Types of Software 9.2 Methods for Integrating Data among Different Types of Software	Recognize the need for integrating data among different types of software. Identify the methods for integrating data among different types of software.	4	Activity 1: Importing data from a database to a spreadsheet (p.325-326)		I, III
	28	9.2 Methods for Integrating Data among Different Types of Software	Be familiar with Object Linking and Embedding (OLE). Recognize the differences of object linking and object embedding. Recognize some common tasks that can be accomplished using OLE.	4	Activity 2: Creating a chart in a Word document (p.336-337) Activity 3: Producing a school letter by using mail merge (p.340-344)		I, III
	29	Uniform Test					
	30 – 31	Easter Holiday					
	32	10.1 Different Ways of Presenting Information 10.2 Using Multimedia Elements in a Presentation 10.3 Creating a Presentation 10.4 Using Microsoft PowerPoint to Construct a Presentation	Understand different ways of presenting information. Recognize different types of multimedia elements. Construct a presentation and plan the storyboard. Construct a presentation using Microsoft PowerPoint.	4	Activity 1: Choosing suitable presentation methods (p.359) Activity 2: Creating a storyboard for 'How can we deal with pressure from examinations?' (p.370) Activity 3: Creating a presentation to introduce your school's extra-curricular activities (p.384-385)		I

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	33	11.1 The Components of a Computer 11.2 Central Processing Unit (CPU) 11.3 Machine Cycle 11.4 Measurement of CPU Speed	Identify the basic components of a computer system. Recognize the structure of a CPU and how it executes an instruction. Recognize the process of executing an instruction. Describe the factors affecting the performance of a CPU.	4	Activity 1: Connecting the peripherals to the system unit (p.5)		II
	34	11.1 Main Memory 11.2 Latest Development of CPU and Main Memory	Describe the functions of main memory. Know more about the latest development of CPU and main memory.	4	Activity 2: Little Man Computer (p.21-25)		
	35	12.1 Input Devices	Describe how the input devices work and be familiar with their special features.	4	Activity 1: Keyboard innovations (p.38) Activity 2: The security of a fingerprint scanner (p.45)		
	36	12.1 Output Devices 12.2 Daily Applications of Input and Output Devices 13.1 Secondary Storage Devices	Describe how the output devices work and be familiar with their special features. Recognize some daily applications of input and output devices. Express the speed and capacity of secondary storage devices in their proper units. Understand the basic concept of magnetic storage and optical storage.	4	Activity 1: Which hard disk would you recommend? (p.72)		

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	37	13.2 Magnetic Storage Devices 13.3 Optical Storage Devices 13.4 Other Forms of Secondary Storage Devices 13.5 Network Storage 13.6 Latest Development of Secondary Storage Devices	Describe the operations and basic features of magnetic storage devices. Describe the operations and basic features of optical storage devices. Describe the basic features of MO disks, memory cards and USB flash drives. Describe the basic features of network storage. Describe the latest development of secondary storage devices.	4	Activity 2: Disk size and cluster size (p.84-85)		
	38	Revision		4			
	39	No Lesson					
	40	Revision		4			
	41 – 43	Final Examination					
	43 – 46	Post Examination					

Core Values of Wah Yan College, Kowloon

I. Love and care	1. Accept & feel positive about himself 2. Appreciation & Gratitude 3. Empathy & Compassion	4. Forgiveness & Reconciliation 5. Service 6. Family as a basic unit of society; marriage is the foundation of a family
II. Strive for excellence	7. Reflective 8. Commitment 9. Perseverance	10. Curiosity & willingness to learn 11. Value imagination and creativity
III. Respect and Justice	12. Life is valuable and respectable 13. Openness to good in all things 14. Respect for himself & others	15. Integrity 16. Faithfulness
IV. Responsibility	17. Freedom & Self-discipline 18. Care for the environment	19. Social Identities: citizen identity, national identity and global citizen identity
V. Faith	20. Experience of God 21. Explore & practise one's faith	22. Appreciate religious liturgies