MARINA INTERNATIONAL SCHOOL
ICT SCHEME OF WORK
FORM 4 - TERM 1

WEEK	TOPIC	TOPIC DETAILS
	NETWORKS AND THE EFFECTS OF USING THEM	
1.1	**Networks**	• Describe the operation and purpose of a router including: • Connecting networks and devices to the internet • Storing computer addresses in a router • Routing data packets
1.2	**Common network devices**	Including: • Network interface cards (NIC), hubs, bridges, switches.
	DOCUMENT PRODUCTION	
1.3	Candidate should be able to: **Ogranise page layout**	• Edit page layout including page size, page orientation, page margins, number of columns, column width, spacing between columns, set and remove breaks (page, section and column breaks)
1.4	**Format Text**	• Set line spacing including: • single, 1.5 times, double, multiple, spacing before and after paragraphs • Set tabulation including: • Left, right, centered and decimal tabs, indented paragraphs and hanging paragraphs • Text enhancement including bold, underline, italic, superscript and subscript, changes in case • Create or edit lists including bulleted, numbered

2.1	**Networks: (continued)**
	
	 Wi-fi and Bluetooth
		• The uses of wi-fi and Bluetooth
		 • Connecting a device to a network using:
		   • Wi-fi
		   • Bluetooth

2.2	**Wi-fi and Bluetooth (continued)**	• Similarities and differences between Bluetooth and wi-fi
	Document Production (continued)	
2.3	Find and replace text Navigation Pagination Gutter margin	• Including matching case, whole words • Add and delete bookmarks/hyperlinks **Candidates should know and understand:** • The purpose of setting page, section and column breaks • The purpose of setting gutter margins
2.4	Find and replace text Navigation Pagination Gutter margin	• Including matching case, whole words • Add and delete bookmarks/hyperlinks **Candidates should know and understand:** • The purpose of setting page, section and column breaks The purpose of setting gutter margins

WEEK	TOPIC	TOPIC DETAILS
3.1	**Cloud computing**	• The characteristics, uses and issues relating to cloud computing • Advantages and disadvantages of using cloud storage compared to other methods
3.2	Common network environments	• Characteristics, uses and purpose of an extranet, intranet and the internet • Differences and similarities between an extranet, intranet and the internet
3.3	**Document Production (continued)**	
	Candidate should be able to: Ogranise page layout	• Edit page layout including page size, page orientation, page margins, number of columns, column width, spacing between columns, set and remove breaks (page, section and column breaks)
3.4	**Format Text**	• Set line spacing including: • single, 1.5 times, double, multiple, spacing before and after paragraphs • Set tabulation including: • Left, right, centered and decimal tabs, indented paragraphs and hanging paragraphs • Text enhancement including bold, underline, italic, superscript and subscript, changes in case • Create or edit lists including bulleted, numbered
4.1	**Networks** *(continued)* Network types	• Local Area Network (LAN), Wireless Local Area Network (WLAN), Wide Area Network (WAN) and the differences between these networks.
	HEADERS AND FOOTERS	
4.2	Use headers and footers appropriately within a range of software packages	• Create or edit headers and footers • Align the contents of the header and footer consistently within a document including to left margin, right margin and centered within margins. • Place text and automated objects in headers and footers including file information, page numbering, total number of pages, date, time
4.3	Headers and Footers	Candidates should know and understand: • The purpose of headers and footers
4.4	Headers and Footers	Candidates should know and understand: • The purpose of headers and footers
	Network Issues and Communication	
5.1	**Security issues regarding data transfer**	• Privacy and confidentiality of data transfer
5.2	**Passwords**	• Avoiding password interception by using up to data anti-spyware and regularly changing password • The differences between strong and weak passwords
	TABLES	
5.3	Work with tables within documents	• Crate a table with a specified number of columns and rows • Place text or objects in a table • Edit a table and its contents including insert row(s) and column(s), delete row(s) and column(s), merge cells

WEEK	TOPIC	TOPIC DETAILS
5.4	Work with tables within documents	• Crate a table with a specified number of columns and rows • Place text or objects in a table • Edit a table and its contents including insert row(s) and column(s), delete row(s) and column(s), merge cells
	PROOFING	
5.5	**Software tools** Candidates should be able to: **Reduce errors**	• Use automated software tools (spell check, grammar check) and make appropriate changes to ensure all work produced contains as few errors as possible. • Use validation routines to minimize data entry errors
5.6	Candidates should know and understand: **Spell check software** **Validation checks**	• Automated suggestions given by spell check software do not always give the correct response • Importance, characteristics and uses of appropriate validation including range check, character check, length check, type check, format check, presence check.
6.1	Network issues and Communication (continued) **Other authentication methods**	Including: • zero login, biometric methods, magnetic stripes, smart cards, physical tokens, electronic tokens.
6.2	**Anti-malware software**	• Including the use of anti-malware and anti-virus software • The operation of removing/quarantining viruses using up to data software • Scanning the storage media used to transfer data • Scanning the data/software when downloading
6.3	**TABLES** (continued) Work with tables within documents	• Format a table including to set horizontal cells alignment (left, right, center, fully justifies), set vertical cells alignment (top, middle, bottom), show gridlines, hide gridlines, wrap text within a cell, shading/colouring cells, adjust tow height, adjust column width.
6.4	Work with tables within documents	• Format a table including to set horizontal cells alignment (left, right, center, fully justifies), set vertical cells alignment (top, middle, bottom), show gridlines, hide gridlines, wrap text within a cell, shading/colouring cells, adjust tow height, adjust column width.
7.1	Network issues and Communication **Electronic conferencing**	• Characteristics, uses, advantages and disadvantages of video-conferencing, audio-conferencing, web-conferencing
7.2	**Electronic conferencing**	• The hardware, software and network connection requires to set up each type of electronic conference.
	PRESENTATIONS	
7.3	**Candidates should be able to:**	**Create a presentation:** • Create a new presentation using a text file • **Use a master slide**: • Insert and edit objects consistently including images,text, shapes, logos, slide headers and footers, placeholder position, automated slide numbering • Format master slide objects including headings,subheadings, bullets, background colour

WEEK	TOPIC	TOPIC DETAILS
7.4	**Candidates should be able to:**	**Create a presentation:** • Create a new presentation using a text file • **Use a master slide**: • Insert and edit objects consistently including images, text, shapes, logos, slide headers and footers, placeholder position, automated slide numbering • Format master slide objects including headings, subheadings, bullets, background colour
THE EFFECTS OF USING IT (Microprocessor-controlled devices)	
8.1	The effects of using microprocessor-controlled devices	**Candidates should know and understand:** • The positive and negative effects of microprocessors/smart devices in monitoring and controlling devices in the home including the impact on lifestyle, leisure time, physical fitness, security of data, the degree of social interaction.
8.2	The effects of using microprocessor-controlled devices	• The positive and negative effects of microprocessors/smart devices in monitoring and controlling devices in the home including the impact on lifestyle, leisure time, physical fitness, security of data, the degree of social interaction.
	IMAGES	
8.3	Place and edit an image File size reduction	**Candidates should be able to:** • Place an image with precision • Resize an image as specified to maintain or adjust the aspect ratio of an image • Crop an image Rotate an image • Reflect (flip) an image horizontally or vertically Adjust the brightness of an image • Adjust the contrast of an image • Group and layer images including grouping and ungrouping, moving to the front or back • Recognise that reducing the file size can be achieved by reducing the image resolution or colour depth
	Presentations *(continued)*	
8.4	**Candidates should be able to:**	**Create a presentation:** • Create a new presentation using a text file **Use a master slide**: • Insert and edit objects consistently including images, text, shapes, logos, slide headers and footers, placeholder position, automated slide numbering • Format master slide objects including headings, subheadings, bullets, background colour

WEEK	TOPIC	TOPIC DETAILS
	Microprocessor-controlled devices	
9.1	The effects of using microprocessor-controlleddevices	• The positive and negative effects of microprocessors/ smart devices in monitoring and controlling transportincluding security of data, autonomous vehicles, transport safety
9.2	The effects of using microprocessor-controlleddevices	• The positive and negative effects of microprocessors/ smart devices in monitoring and controlling transportincluding security of data, autonomous vehicles, transport safety
	IMAGES	
9.3	**Candidate should be able to:** Place and edit an image	• Place an image with precision • Resize an image as specified to maintain or adjust theaspect ratio of an image • Crop an image Rotate an image • Reflect (flip) an image horizontally or verticallyAdjust the brightness of an image • Adjust the contrast of an image • Group and layer images including grouping andungrouping, moving to the front or back.
	File size reduction	• Recognise that reducing the file size can be achieved by reducing the image resolution or colour depth
	Presentations *(continued)*	
9.4	**Edit a presentation**	• Apply slide layout • Insert a new slide Move or delete a slide • Insert and edit objects on a slide including text (headings, subheadings, bulleted lists), images (stillimages, video clips, animated images), charts, tables,audio clips (sound), symbols, lines, arrows, call out boxes and shapes
	POTENTIAL HEALTH PROBLEMS RELATED TO THE PROLONGED USE OF IT EQUIPMENT	
10.1	**Candidates should know and understand:** Health issues	**Including:** • repetitive strain injury (RSI) • backproblems • eye problems • headaches • The causes of these health issues and strategies for preventing them.
10.2	Health issues	**Including:** • repetitive strain injury (RSI) • backproblems • eye problems • headaches • The causes of these health issues and strategies for preventing them.
	LAYOUT: [In this section 'document' relates to any of the applications used within sections 16 to 21.]	
10.3	**Create or edit a document.** Create a new document, or edit an existing document	Candidates should be able to: • Enter and modify text and numbers with total accuracy • Use editing techniques to manipulate text and numbers including highlight, delete, move, cut, copy,paste, drag and drop

WEEK	TOPIC	TOPIC DETAILS
10.4	Create a new document, or edit an existing document	- Place objects into the document from a variety of sources including text, image, screenshot, shapes, table, graph or chart, spreadsheet extract, databaseextract. - Wrap text around a table, chart or image includingabove, below, square and tight.
	REVISION	
11.1	Revision exercise for Theory Paper 1	The aim is to select any topic(s) amongst the topics covered since the beginning of the term. Past IGCSE Examination Questions Papers will also be used during these lessons.
11.2	Revision exercise for Theory Paper 1	The aim is to select any topic(s) amongst the topics covered since the beginning of the term. Past IGCSE Examination Questions Papers will also be used during these lessons.
11.3	Revision exercise in Document Production	This will focus on any area that still seems to be challenging to the candidates. Past IGCSE Examination Questions will be used during these lessons
11.4	Revision exercise in Document Production	This will focus on any area(s) that still seem to challenging to the candidates Past IGCSE Examination Questions Papers will also be used during these lessons.
	REVISION	
12.1	Revision exercise for Theory Paper 1	The aim is to select any topic(s) amongst the topics covered since the beginning of the term. Past IGCSE Examination Questions Papers will also be used during these lessons.
12.2	Revision exercise for Theory Paper 1	The aim is to select any topic(s) amongst the topics covered since the beginning of the term. Past IGCSE Examination Questions Papers will also be used during these lessons.
12.3	Revision exercise in Presentations	This will focus on any area(s) that still seem to challenging to the candidates Past IGCSE Examination Questions Papers will also be used during these lessons.
12.4	Revision exercise in Presentations	This will focus on any area(s) that still seem to challenging to the candidates Past IGCSE Examination Questions Papers will also be used during these lessons.

MARINA INTERNATIONAL SCHOOL
ICT SCHEME OF WORK
FORM 4 - TERM 2

WEEK	TOPIC	TOPIC DETAILS
	OPERATING SYSTEMS	
1.1	Operating systems	**Candidates should know and understand:**
		Characteristics of operating systems including:
		▪ Command Line Interface (CLI),
		▪ Graphical User Interface (GUI),
		▪ Dialogue based and
		▪ Gesture based interface
1.2	Operating systems	▪ Differences between types of operating systems
		▪ Advantages and disadvantages of the different typesof operating systems
	DATABASES	
1.3	**Candidates should be able to:**	**Create an appropriate database structure**
		▪ Import data from existing files (including .csv, .txt)using specified field names to create tables
		▪ Set appropriate data types to fields including text,numeric (integer, decimal, currency), date/time, Boolean/logical
		▪ Set sub-types of numeric data including percentage,number of decimal places
		▪ Set display format of Boolean/logical field (yes/no,true/false, checkbox)
		▪ Set display format of date/time data Create and edit primary and foreign keys
		▪ Create relationships between tables
1.4	**Candidates should be able to:**	**Create an appropriate database structure**
		▪ Import data from existing files (including .csv, .txt)using specified field names to create tables
		▪ Set appropriate data types to fields including text,numeric (integer, decimal, currency), date/time, Boolean/logical
		▪ Set sub-types of numeric data including percentage,number of decimal places
		▪ Set display format of Boolean/logical field (yes/no,true/false, checkbox)
		▪ Set display format of date/time data Create and edit primary and foreign keys
		▪ Create relationships between tables

WEEK	TOPIC	TOPIC DETAILS
	TYPES OF COMPUTER	
2.1	Desktop computer	**Candidates should know and understand:** ▪ Characteristics of a desktop computer ▪ Uses of a desktop computer including office and business management, education, gaming and entertainment
2.2	Mobile computers	▪ Characteristics of mobile computers including laptop computers, smartphones, tablet and phabletcomputers ▪ Uses of mobile computers including office and business management, education, gaming, entertainment and remotely controlled devices ▪ Advantages and disadvantages of the different typesof computer including portability and expandability
2.3	**Databases (continued)**	▪ **Create and use a data entry form:** ▪ Create a data entry form including specified fields, appropriate font styles and sizes, appropriate spacingbetween fields, character spacing of individual fields, use of white space, radio buttons, check boxes, drop down menus.
2.4	**Databases (continued)**	**Create and use a data entry form:** ▪ Create a data entry form including specified fields, appropriate font styles and sizes, appropriate spacingbetween fields, character spacing of individual fields, use of white space, radio buttons, check boxes, drop down menus.
	EMERGING TECHNOLOGIES	
3.1	Impact of emerging technologies	**Candidates should know and understand:** ▪ Impact on everyday life including Artificial Intelligence (AI), extended reality (virtual andaugmented)
3.2	Impact of emerging technologies	▪ Impact on everyday life including Artificial Intelligence (AI), extended reality (virtual andaugmented)
3.3	**Databases** *(continued)* Types of database	▪ **Candidates should know and understand:** ▪ Characteristics, uses, advantages and disadvantages of a flat file and a relational database
3.4	Primary and foreign keys Form design	▪ Characteristics of primary key and foreign keys ▪ Characteristics of good form design
	SAFETY AND SECURITY	
4.1	**Physical safety**	**Candidates should know and understand:** **Safety issues** Including: ▪ electrocution from spilling drinks near electrical equipment and touching live cables, ▪ fire from sockets being overloaded or equipment overheating, tripping over trailing cables, ▪ heavy equipment falling and injuring people ▪ The causes of these safety issues and strategies forpreventing them

WEEK	TOPIC	TOPIC DETAILS
4.2	**eSafety** Data protection Personal data	**Candidates should know and understand:** ■ The principles of a typical data protection act and why data protection legislation is required ■ Characteristics of personal and sensitive data including personal name, address, date of birth, aphotograph in school uniform, medical history ■ The need for personal data to be kept confidentialand protected to avoid inappropriate disclosure
	Databases (continued)	
4.3	**Manipulate data** Perform calculations	**Candidates should be able to:** ■ Use arithmetic operations or numeric functions toperform calculations including calculated fields, calculated controls ■ Use formulae and functions to perform calculationsat run time including addition, subtraction, multiplication, division, sum, average, maximum, minimum, count
4.4	Sort data Search and select data	■ Use a single criterion, or multiple criteria to sort data into ascending or descending order. ■ Use a single criterion, or multiple criteria to selectsubsets of data using a query. ■ perform searches using a variety of operators including AND, OR, NOT, LIKE, >, <, =, >=, <=, <> ■ perform searches using wildcards
5.1	**eSafety** *(continued)*	■ The need for eSafety when using the internet, email, social media, online gaming. ■ Minimise the potential danger of using: ■ The internet including only using trusted websites recommended by teachers, using a search engine thatonly allows access to age appropriate websites ■ Email including an awareness of the potential dangersof opening or replying to an email from an unknownperson. An awareness of the risks associated with sending personal identifiable data or images via email
5.2	**eSafety** *(continued)*	■ Social media including knowing how to block and report unwanted users, an awareness of the potential dangers of meeting an online contact faceto face, avoiding the distribution of inappropriate images, avoiding the use of inappropriate language, respecting confidentiality of personal data of other people ■ Online gaming including not using real names, notgiving out personal or financial data

WEEK	TOPIC	TOPIC DETAILS
	Presentations (continued)	
5.3	Edit a presentation	■ Add presenter notes ■ Insert and edit a hyperlink including linking text or objects to a slide within the presentation, an externalfile or an email address ■ Insert an action button including modifying settingsto navigate to a specified slide or file ■ Add alternative text/screen tip to an object Apply consistent transitions between slides ■ Apply consistent animation effects on text, imagesand other objects ■ Hide slides within a presentation
5.4	Output the presentation	■ Display the presentation for a variety of purposesincluding looped on-screen carousel, presenter controlled ■ Print the presentation in a variety of layouts includingfull page slides, presenter notes, handouts
6.1	**Security of data** Threats to data	**Candidates should know and understand:** ■ Characteristics and effect of threats to data includinghacking, phishing, pharming, smishing, vishing, viruses, malware, card fraud ■ Hacking including the measures that must be taken inorder to protect data ■ Phishing, pharming, smishing, vishing including themethods that can be used to help prevent them ■ Viruses and malware including how to take preventative action to avoid the danger of infecting acomputer from a downloaded file ■ Card fraud including shoulder surfing, card cloning,key logging
6.2	Threats to data	■ Characteristics and effect of threats to data includinghacking, phishing, pharming, smishing, vishing, viruses, malware, card fraud ■ Hacking including the measures that must be taken inorder to protect data ■ Phishing, pharming, smishing, vishing including themethods that can be used to help prevent them ■ Viruses and malware including how to take preventative action to avoid the danger of infecting acomputer from a downloaded file ■ Card fraud including shoulder surfing, card cloning,key logging
	Presentations (continued)	
6.3	Edit a presentation	■ Add presenter notes ■ Insert and edit a hyperlink including linking text or objects to a slide within the presentation, an externalfile or an email address ■ Insert an action button including modifying settingsto navigate to a specified slide or file ■ Add alternative text/screen tip to an object Apply consistent transitions between slides ■ Apply consistent animation effects on text, imagesand other objects Hide slides within a presentation
6.4	Output the presentation	■ Display the presentation for a variety of purposesincluding looped on-screen carousel, presenter controlled Print the presentation in a variety of layouts includingfull page slides, presenter notes, handouts

WEEK	TOPIC	TOPIC DETAILS
	COPYRIGHT	
7.1	Copyright	**Candidates should know and understand:** ▪ The need for copyright legislation and the principles of copyright relating to computer software (e.g. software piracy) ▪ The methods that software producers employ to prevent software copyright legislation being broken
	COMMUNICATION	
7.2	**Communication with other ICT users using email.**	**Candidates should know and understand:** **Email:** ▪ Characteristics, uses and constraints of email communication including acceptable language, guidelines set by an employer, the need for security, netiquette, email groups, carbon copy (cc), blind carbon copy (bcc), forward, attachments ▪ Characteristics and effects of spam email including the methods which can be used to help prevent spam
	Databases *(continued)*	
7.3	**Manipulate data** Perform calculations	**Candidates should be able to:** ▪ Use arithmetic operations or numeric functions to perform calculations including calculated fields, calculated controls ▪ Use formulae and functions to perform calculations at run time including addition, subtraction, multiplication, division, sum, average, maximum, minimum, count
7.4	Sort data Search and select data	▪ Use a single criterion, or multiple criteria to sort data into ascending or descending order. ▪ Use a single criterion, or multiple criteria to select subsets of data using a query. ▪ perform searches using a variety of operators including AND, OR, NOT, LIKE, >, <, =, >=, <=, <> ▪ perform searches using wildcards
8.1	**Security of data (continued)** Protection of data	▪ Characteristics and methods of protecting data including biometrics, digital certificate, secure socket layer (SSL), encryption, firewall, two-factor authentication, user id and password ▪ Biometrics including the use of biometric data Digital certificate including its purpose and contents ▪ Secure socket layer (SSL) including encrypted links between the server and the client computer ▪ Encryption including its purpose for the protection of data on hard discs, email, cloud, HTTPS websites ▪ Firewall including its purpose ▪ Two-factor authentication including its purpose and function User id and password including how they are used to increase the security of data

WEEK	TOPIC	TOPIC DETAILS
8.2	Protection of data	▪ Characteristics and methods of protecting data including biometrics, digital certificate, secure socket layer (SSL), encryption, firewall, two-factorauthentication, user id and password ▪ Biometrics including the use of biometric data Digital certificate including its purpose and contents ▪ Secure socket layer (SSL) including encrypted linksbetween the server and the client computer ▪ Encryption including its purpose for the protection ofdata on hard discs, email, cloud, HTTPS websites ▪ Firewall including its purpose ▪ Two-factor authentication including its purpose andfunction ▪ User id and password including how they are used toincrease the security of data
	Manipulate data (continued)	
8.3	Present data	**Candidates should be able to:** **Display data** ▪ Produce reports to display data including displayingall the required data and labels in full ▪ Use appropriate headers and footers within a database report including report header, reportfooter, page header, page footer ▪ Set report titles ▪ Produce different output layouts including controlling the display of data, labels, tabular orcolumnar format ▪ Align data and labels appropriately including rightaligning numeric data and decimal alignment ▪ Control the display format of numeric data includingnumber of decimal places, currency symbol, percentage
8.4	Present data	**Candidates should be able to:** **Display data** ▪ Produce reports to display data including displayingall the required data and labels in full ▪ Use appropriate headers and footers within a database report including report header, reportfooter, page header, page footer ▪ Set report titles ▪ Produce different output layouts including controlling the display of data, labels, tabular orcolumnar format ▪ Align data and labels appropriately including rightaligning numeric data and decimal alignment ▪ Control the display format of numeric data includingnumber of decimal places, currency symbol, percentage

WEEK	TOPIC	TOPIC DETAILS
	Effective use of the Internet	
9.1	The internet	Candidates should know and understand: ■ Characteristics, uses, advantages and disadvantagesof using the internet including the differences between the internet, an intranet, an extranet and the World Wide Web (WWW), blog, forum, wiki, social networking ■ Functionality including Internet Service Provider (ISP), structure of a web address, Uniform ResourceLocator (URL), hyperlink, web browser ■ Use of search engine including speed of searching, amount of information, the speed of finding relevantinformation, ease of finding reliable information ■ Evaluating the information found on the internet including how up to date, reliable, biased and validthis information is.
9.2	The internet	Candidates should know and understand: ■ Characteristics, uses, advantages and disadvantagesof using the internet including the differences between the internet, an intranet, an extranet and the World Wide Web (WWW), blog, forum, wiki, social networking ■ Functionality including Internet Service Provider (ISP), structure of a web address, Uniform ResourceLocator (URL), hyperlink, web browser ■ Use of search engine including speed of searching, amount of information, the speed of finding relevantinformation, ease of finding reliable information ■ Evaluating the information found on the internet including how up to date, reliable, biased and validthis information is.
	Manipulate data (continued)	
9.3	Present data	**Candidates should be able to:** **Display data** ■ Produce reports to display data including displayingall the required data and labels in full ■ Use appropriate headers and footers within a database report including report header, reportfooter, page header, page footer ■ Set report titles ■ Produce different output layouts including controlling the display of data, labels, tabular orcolumnar format ■ Align data and labels appropriately including rightaligning numeric data and decimal alignment ■ Control the display format of numeric data includingnumber of decimal places, currency symbol, percentage
9.4		■ Produce reports to display data including displayingall the required data and labels in full ■ Use appropriate headers and footers within a database report including report header, reportfooter, page header, page footer ■ Set report titles ■ Produce different output layouts including controlling the display of data, labels, tabular orcolumnar format ■ Align data and labels appropriately including rightaligning numeric data and decimal alignment ■ Control the display format of numeric data includingnumber of decimal places, currency symbol, percentage

WEEK	TOPIC	TOPIC DETAILS
10.1	The internet	▪ Internet protocols including HyperText Transfer Protocol (HTTP), HyperText Transfer Protocol securevariant (HTTPS), File Transfer Protocol (FTP), Secure Socket Layer (SSL) ▪ Risks of using the internet including inappropriateand criminal material, restricting data through parental, educational and ISP control
10.2	The internet	▪ Internet protocols including HyperText Transfer Protocol (HTTP), HyperText Transfer Protocol securevariant (HTTPS), File Transfer Protocol (FTP), Secure Socket Layer (SSL) Risks of using the internet including inappropriateand criminal material, restricting data through parental, educational and ISP control
	Presentations (continued)	
10.3	**Edit a presentation**	▪ Add presenter notes ▪ Insert and edit a hyperlink including linking text or objects to a slide within the presentation, an externalfile or an email address ▪ Insert an action button including modifying settingsto navigate to a specified slide or file ▪ Add alternative text/screen tip to an object Apply consistent transitions between slides ▪ Apply consistent animation effects on text, imagesand other objects ▪ Hide slides within a presentation
10.4	**Output the presentation**	▪ Display the presentation for a variety of purposesincluding looped on-screen carousel, presenter controlled ▪ Print the presentation in a variety of layouts includingfull page slides, presenter notes, handouts
	REVISIONJ AND MID YEAR EXAMINATION	
11.1	Revision exercise for Theory Paper 1	The aim is to select any topic(s) amongst the topics covered since the beginning of the term. Past IGCSE Examination Questions Papers will also be used during these lessons.
11.2	Revision exercise for Theory Paper 1	The aim is to select any topic(s) amongst the topics covered since the beginning of the term. Past IGCSE Examination Questions Papers will also be used during these lessons.
11.3	Revision exercise in Practical Paper 2	This will focus on any area that still seems to be challenging to the candidates. Past IGCSE Examination Questions will be used during these lessons
11.4	Revision exercise in Practical Paper 2	This will focus on any area that still seems to be challenging to the candidates. Past IGCSE Examination Questions will be used during these lessons
12.1	Revision exercise for Theory Paper 1	The aim is to select any topic(s) amongst the topics covered since the beginning of the term. Past IGCSE Examination Questions Papers will also be used during these lessons.
12.2	Revision exercise for Theory Paper 1	The aim is to select any topic(s) amongst the topics covered since the beginning of the term. Past IGCSE Examination Questions Papers will also be used during these lessons.
12.3	Revision exercise in Practical Paper 2	This will focus on any area that still seems to be challenging to the candidates. Past IGCSE Examination Questions will be used during these lessons
12.4	Revision exercise in Practical Paper 2	This will focus on any area that still seems to be challenging to the candidates. Past IGCSE Examination Questions will be used during these lessons

MARINA INTERNATIONAL SCHOOL
ICT SCHEME OF WORK
FORM 4 - TERM 3

WEEK	TOPIC	TOPIC DETAILS
		SYSTEMS ANALYSIS AND DESIGN: (SYSTEMS DEVELOPMENT) **THE SYSTEMS LIFE CYCLE**
	ANALYSIS STAGE	
1.1	**Analysis** Analysis of the current system	**Candidates should know and understand:** o What is Analysis and what does it involves? o Characteristics, uses, advantages and disadvantages of the research methods of observation, interviews, questionnaires and examination of existing documents
1.2	Record and analyse information about the current system System specification	o The need to identify the inputs, outputs and processing of the current system, problems with the current system, the user and information requirements for the new system. o Identify and justify suitable hardware and software for the new system.
	SPREADSHEETS	
1.3	**Create a data model**	**Candidates should be able to:** Create and edit a spreadsheet model o Insert cell(s), row(s) and column(s), delete cell(s),row(s) and column(s), merge cells o Create formulae using cell references o Replicate formulae using absolute and relative cell references where appropriate o Use arithmetic operators in formulae including add,subtract, multiply, divide, indices
1.4	**Create a data model**	Create and edit a spreadsheet model o Insert cell(s), row(s) and column(s), delete cell(s),row(s) and column(s), merge cells o Create formulae using cell references o Replicate formulae using absolute and relative cell references where appropriate o Use arithmetic operators in formulae including add,subtract, multiply, divide, indices

WEEK	TOPIC	TOPIC DETAILS
	DESIGN STAGE	
2.1	**Design:** ○ **File structures/data structures** ○ **Validation routines** ○ **Input formats** ○ **Output formats**	Candidates should know and understand: **Design:** ○ Design file/data structures, input formats, outputformats and validation routines ○ File/data structures including field length, field name,data type, coding of data for example M for male, F for female ○ Validation routines including range check, charactercheck, length check, type check, format check, presence check, check digit ○ Input formats including data capture forms ○ Output formats including screen layouts and reportlayouts
2.2	**Design** ○ **File structures/data structures** ○ **Validation routines** ○ **Input formats** ○ **Output formats**	Candidates should know and understand: **Design:** ○ Design file/data structures, input formats, outputformats and validation routines ○ File/data structures including field length, field name,data type, coding of data for example M for male, F for female ○ Validation routines including range check, charactercheck, length check, type check, format check, presence check, check digit ○ Input formats including data capture forms ○ Output formats including screen layouts and reportlayouts
2.3	**Create a data model (continued)**	○ Use named cells and named ranges ○ Use functions including sum, average, maximum, minimum, integer, rounding, counting, LOOKUP, VLOOKUP, HLOOKUP, XLOOKUP, IF ○ Use external data sources within functionsUse nested functions
2.4	**Create a data model (continued)**	○ Use named cells and named ranges ○ Use functions including sum, average, maximum, minimum, integer, rounding, counting, LOOKUP, VLOOKUP, HLOOKUP, XLOOKUP, IF ○ Use external data sources within functionsUse nested functions
	DEVELOPMENT AND TESTING STAGES	
3.1	**Development of a system**	**Candidates should know and understand:** ○ What is systems development? ○ Stages of development
3.2	**Testing**	**Candidates should know and understand:** ○ The need to test the system before implementation ○ Test designs, test strategies, test plan (test data,expected outcomes, actual outcomes, remedialaction) following testing ○ Test designs including the testing of data structures,file structures, input formats, output formats and validation routines ○ Test strategies including to test each module, eachfunction and the whole system ○ The definition, characteristics and use of test datausing normal, abnormal and extreme data ○ The use of live data

WEEK	TOPIC	TOPIC DETAILS
3.3	**Create a data model (continued)**	o Use named cells and named ranges o Use functions including sum, average, maximum, minimum, integer, rounding, counting, LOOKUP, VLOOKUP, HLOOKUP, XLOOKUP, IF Use external data sources within functionsUse nested functions
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	IMPLEMENTATION STAGE	
4.1	System implementation	**Candidates should know and understand:** o What is system implementation? o Changing over to the new system o Characteristics, uses, advantages and disadvantagesof the four methods of implementation, direct changeover, parallel running, pilot running, phased implementation
4.2	System implementation	**Candidates should know and understand:** o What is system implementation? o Changing over to the new system o Characteristics, uses, advantages and disadvantagesof the four methods of implementation, direct changeover, parallel running, pilot running, phased implementation
4.3	**SPREADSHEETS (continued)** Formulae and functions Order of operations Cell referencing	**Candidates should know and understand:** o The difference between a formula and a function o The order in which mathematical operations are performed including the use brackets to make surethat formulae work o Characteristics and use of absolute and relative cellreferencing
4.4	**SPREADSHEETS (continued)** Formulae and functions Order of operations Cell referencing	**Candidates should know and understand:** o The difference between a formula and a function o The order in which mathematical operations are performed including the use brackets to make surethat formulae work o Characteristics and use of absolute and relative cellreferencing
	DOCUMENTATION STAGE	
5.1	Documentation	**Candidates should know and understand:** o Characteristics, uses and purpose of technical anduser documentation o Components of technical documentation including: purpose of the system/program, limitations of the system, program listing, program language, programflowcharts/algorithms, system flowcharts, hardware and software requirements, file structures, list of variables, input format, output format, sample runs/test runs, validation routines o Components of user documentation including: purpose of the system, limitations of the system, hardware and software requirements, how to load/ run/install software, how to save a file, how to printdata, how to add records, how to delete/edit records,input format, output format, sample runs, error messages, error handling, troubleshooting guide/ helpline, frequently asked questions, glossary of terms

WEEK	TOPIC	TOPIC DETAILS
5.2	Documentation	**Candidates should know and understand:** o Characteristics, uses and purpose of technical and user documentation o Components of technical documentation including: purpose of the system/program, limitations of the system, program listing, program language, program flowcharts/algorithms, system flowcharts, hardware and software requirements, file structures, list of variables, input format, output format, sample runs/test runs, validation routines o Components of user documentation including: purpose of the system, limitations of the system, hardware and software requirements, how to load/ run/install software, how to save a file, how to print data, how to add records, how to delete/edit records, input format, output format, sample runs, error messages, error handling, troubleshooting guide/ helpline, frequently asked questions, glossary of terms
5.3	**Manipulate data** Sort data Search and select data	**Candidates should be able to:** Using a single criterion, or multiple criteria sort data into ascending or descending order Using a single criterion, or multiple criteria, select subsets of data Perform searches using a variety of operators including AND, OR, NOT, >, <, =, >=, <=, <> Perform searches using wildcards
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	EVALUATION STAGE	
6.1	**Evaluate a solution**	**Candidates should know and understand:** o Why is it important to evaluate a system? o What does an evaluation look for? o How is an evaluation carried out? o Evaluate a solution including the efficiency of the solution, the ease of use of the solution, and the appropriateness of the solution o Compare the solution with the original task requirements, identify any limitations and necessary improvements to the system, evaluate the users' responses to the results of testing the system
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WEEK	TOPIC	TOPIC DETAILS
6.3	**Present data** Adjust the display features	**Candidates should be able to:** o Display either formulae or values o Adjust row height, column width and cell sizes so that all data, labels, and formulae is fully visible o Wrap text within cells so that all data is fully visible Hide and display rows and columns
6.4	Format a spreadsheet	o Enhance a spreadsheet including text colour, cell colour, bold, underline, italic, shading o Format numeric data appropriately including to display the number of decimal places, different currency symbols, percentages o Use conditional formatting to change the display format depending on the contents of a cell
6.5	Set page layout	o Set the orientation to portrait or landscape Control the page layout to print including specified number of pages, print area, display or hide gridlines, display or hide row and column headings
	AUDIENCE	
7.1	**Audience appreciation**	**Candidates should know and understand:** o Audience appreciation o Show a clear sense of audience and purpose o Planning ICT solutions that are responsive to and respectful of the needs of an audience o Analyse the needs of an audience when creating ICT solutions
7.2	**Audience appreciation**	**Candidates should know and understand:** o Audience appreciation o Show a clear sense of audience and purpose o Planning ICT solutions that are responsive to and respectful of the needs of an audience o Analyse the needs of an audience when creating ICT solutions
	FILE MANAGEMENT	
7.3	Manage files	**Candidates should be able to:** o Locate stored files o Open and import files of different types o Save files in a planned hierarchical directory/folder structure o Save files using appropriate file names o Save and print files in a variety of formats including a document, screenshots, database reports, data tables, graphs/charts, a web page in browser view, a web page in HTML view o Save and export in the file format of an application package including .docx, .doc, .xlsx, .xls, .sdb, .sdc, .accdb .odb, .rtf, .pptx, .ppt o Save and export in a generic file format including .csv, .txt, .rtf, .pdf, .css, .htm, .jpg, .png

WEEK	TOPIC	TOPIC DETAILS
7.4	Manage files	**Candidates should be able to:** o Locate stored files o Open and import files of different types o Save files in a planned hierarchical directory/folderstructure o Save files using appropriate file names o Save and print files in a variety of formats includinga document, screenshots, database reports, data tables, graphs/charts, a web page in browser view, aweb page in HTML view o Save and export in the file format of an applicationpackage including .docx, .doc, .xlsx, .xls, .sdb, .sdc, .accdb .odb, .rtf, .pptx, .ppt o Save and export in a generic file format including .csv, .txt, .rtf, .pdf, .css, .htm, .jpg, .png
	ICT APPLICATIONS	
8.1	**Communication**	**Candidates should know and understand:** Communication media Characteristics and uses including newsletters, posters, websites, multimedia presentations, audio,video, media streaming and ePublications
8.2	**Mobile communication**	The use of mobile devices for communication including: SMS messaging, phone calls, Voice overInternet Protocol (VoIP), video calls, accessing the internet
8.3	File formats	**Candidates should know and understand:** o Characteristics and uses of file formats including css,csv, gif, htm, jpg, pdf, png, rtf, txt, zip, rar o The need for generic file formats
8.4	**Reduce file sizes for storage or transmission** Compress files File compression	**Candidates should be able to:** o Reduce file sizes for storage or transmission wherenecessary using file compression including .zip, .rar o The need to reduce file sizes for storage ortransmission
WEEK	**TOPIC**	**TOPIC DETAILS**
	REVISION AND END OF YEAR EXAMINATION	
	Section 1 Theory	
9.1	Revision exercise for Theory Paper 1	The aim is to select any topic(s) amongst the topics covered since the beginning of the term. Past IGCSE Examination Questions Papers will also be used during these lessons.
9.2	Revision exercise for Theory Paper 1	The aim is to select any topic(s) amongst the topics covered since the beginning of the term. Past IGCSE Examination Questions Papers will also be used during these lessons.
9.3	**Section 2 Practical**	
9.4	Revision exercise in Practical Paper 2	This will focus on any area that still seems to be challenging to the candidates. Past IGCSE Examination Questions will be used during these lessons
	Revision exercise in Practical Paper 2	This will focus on any area that still seems to be challenging to the candidates. Past IGCSE Examination Questions will be used during these lessons

WEEK	TOPIC	TOPIC DETAILS
REVISION AND END OF YEAR EXAMINATION		
	Section 1 Theory	
10.1	Revision exercise for Theory Paper 1	The aim is to select any topic(s) amongst the topics covered since the beginning of the term.
		Past IGCSE Examination Questions Papers will also be used during these lessons.
10.2	Revision exercise for Theory Paper 1	The aim is to select any topic(s) amongst the topics covered since the beginning of the term.
		Past IGCSE Examination Questions Papers will also be used during these lessons.
	Section 2 Practical	
10.3	Revision exercise in Practical Paper 2	This will focus on any area that still seems to be challenging to the candidates.
		Past IGCSE Examination Questions will be used during these lessons
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