



The aim of the information communication and technology (ICT) standards is to develop and recognise the ability of learners to apply and transfer skills in ways that are appropriate to their situation. The skills can be applied in educational, personal and workplace settings.

Functional Skills qualifications in ICT assess 3 interrelated skill areas:

- Using ICT
- Finding and selecting information
- Developing, presenting and communicating information.

The 'Using ICT' marks are given for identifying the problem and selecting the appropriate tools in order to plan for a solution.

The 'Finding and selecting information' marks are given for identifying and demonstrating the process needed to work towards a solution. Evidence of how the process is carried out is vital.

The 'Developing, presenting and communicating information' marks are given for the evidence of the final product.

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Entry Level 3

Understanding how to interpret the functional ICT skill standards, coverage and range

Skill standards

Read and understand the purpose and content of straightforward texts that explain, inform and recount information.

Using ICT (20-30%)

1. Interact with ICT and use an ICT system to meet given needs
2. Store information
3. Follow safety and security practices.

Finding and selecting information (10-20%)

4. Use simple searches to find information
5. Select relevant information that matches the requirements of the given task.

Developing, presenting and communicating information (50-70%)

6. Enter and develop different types of information to meet given needs
7. Bring together different types of information for a given purpose
8. Use ICT-based communication.

Entry Level 3

Marks will be awarded as follows (continued):

Skill standards	Coverage and range	What does this mean?	Example
Using ICT 1. Interact with ICT and use an ICT system to meet given needs	a Use correct procedures to start and shut down an ICT system	<p>Follow correct methods to start up and shut down an ICT system</p> <p>Demonstrate how to start and shut down an ICT system (computer or mobile phone), making correct use of login procedures, including the use of a password or PIN, and correctly exiting the same system</p>	<p>Switch on and start up ICT systems (e.g. computer, mobile phone, digital camera)</p> <p>Login to a user account by entering user name and password</p> <p>Exit software safely and securely, log out and shut down following the correct procedure</p>
	b Use input and output devices	<p>Know the main components of computer hardware. For every system there is: Input → Process → Output</p> <p>Know how to use a keyboard, mouse, or microphone as an input device, and a screen (monitor) or a printer as an output device</p> <p>Recognise a touch screen: this is both an input and an output device</p>	Use touch-screen technology
	c Use software applications to meet needs and solve given problems	Use application software such as word processor, spreadsheet, email and internet browser. Know when and where to use these different types of software	<p>Write a letter or article using word-processing software</p> <p>Keep track of a household budget using a spreadsheet with basic formulae (i.e. add or subtract)</p> <p>Keep in touch with friends using email</p>
	d Recognise and use interface features	Know that interface features can be icons, option buttons, hyperlinks or hotspots. They perform functions such as print	Know that interface features can be icons, option buttons, hyperlinks or hotspots. They perform functions such as print
	e Change simple software settings	Be able to change the window size, mouse settings, screen brightness and volume. All of these can be adjusted to meet the user's own needs or the needs of others	Change the software setting to show orientation as landscape instead of portrait

Entry Level 3

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Skill standards	Coverage and range	What does this mean?	Example
Using ICT 2. Store information	a Open and save files	Access and open a file using either an icon or menu option within the software (e.g. File → Open) Name files appropriately and save securely in the correct location	Using features such as 'save as', save a written document with a suitable name to help identify what is in it Open the file and amend the document and save again Practise using different software applications, such as spreadsheet and word processor
	b Know how to insert and remove media	Use media such as CD, DVD, USB memory stick, external hard drive and memory card. Follow correct procedures to insert and remove	Be able to insert a memory stick correctly and to close files before removing memory stick safely
Using ICT 3. Follow safety and security practices	a Use and change passwords	Know the importance of keeping certain information secure by using a password that cannot be guessed easily by another person. Change password regularly (or when security may have been breached)	Access a user account with a password, change the password to something memorable, but difficult for someone else to guess
	b Minimise physical stress	Recognise that when using a computer for long periods of time, user should adjust seating and lighting, avoid hazards and take regular breaks to avoid eye strain. To avoid RSI, arrange hardware and seating, and use wrist rests. Use other devices such as anti-glare screens and document holders Understand why it is important not to have liquids near ICT equipment and to take care to avoid obstacles	Follow health and safety procedures when using a computer. Check: <ul style="list-style-type: none"> • workstation is tidy with no trailing cables • height and comfort of seating • posture support • position/tilt of monitor (screen) • lighting (glare) Consider other devices such as smartphones, tablets and laptops: <ul style="list-style-type: none"> • use devices when safe to do so (not while driving or crossing the road, etc) • take regular breaks from devices

Entry Level 3

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Skill standards	Coverage and range	What does this mean?	Example
Finding and selecting information 4. Use simple searches to find information	a Search stored information	Select and use a variety of sources of information independently Recognise that stored information can be in the form of existing databases from a variety of sources, including a CD, DVD, intranet or internet Demonstrate use of search criteria. Demonstrate judgement of material found with a focus on the intended audience, not necessarily the first material available	Use clip art to illustrate a flyer advertising the opening of a sports club, or to decorate a party invitation or to advertise a disco Use details sent to you (e.g. email, podcast, web reference, hyperlink file, map) When searching for relevant information the focus must be on the needs of the intended audience
	b Know how to insert and remove media	Use the internet to find information Enter a web address, use a search engine, save search material, use bookmarks and favourites	Search for information on the internet, e.g. images of the Olympics 2012, opening times of a cinema
Finding and selecting information 5. Select relevant information that matches requirements of a given task		Recognise that once the search for information has been carried out, it is important to select only that which is relevant to the task In doing so, it's also important to recognise copyright constraints, intention and authority of the provider, currency of the information, relevance and bias	Prepare a flyer advertising a cycling event. Search through the sources (email, podcast, web reference, file, map, other) containing various information including opening times, prices and/or other necessary detail Copy and paste relevant information. Choose an appropriate image which is fit for the purpose

Entry Level 3

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Skill standards	Coverage and range	What does this mean?	Example
Developing, presenting and communicating information 6. Enter and develop different types of information to meet given needs	a Enter, edit and format information, including text, graphics, numbers or other digital content to achieve the required outcome	<p>Enter text, images and numeric information</p> <p>Make changes where necessary and improve layout by changing margins (top, bottom, left and right), portrait, landscape (i.e. page orientation), insert, drag and drop</p> <p>Use graphical software</p> <p>Change font size, type, style (bold, underline and italics); delete and/or change text</p>	<p>Create a poster/flyer, using some given information, to advertise an event, e.g. company outing, college day out, articles for sale. Ensure important details stand out by changing font sizes and type, and enhance using colour, bold, underline or italics as appropriate</p> <p>Add information to a spreadsheet (title, price) and format cells as currency, per cent, number of decimal places. Adjust column width, show formulae. Make sure all detail is clear and easy to see</p>
	b Insert and position graphics or other digital content to achieve a purpose	<p>Insert an image (from a file, clip art, photo, scanned image) into a document and position it so that it does not obscure any other information. Use alignment, (left, right, centre), line spacing, colour, font, style and size</p>	<p>Place an image within a poster/flyer to advertise an event. Make sure that it is a clear image that is not obscuring any other information</p> <p>Align images (left, right, centre). Resize images to suit the purpose of document (e.g. logo at the top of the page, image still in proportion. Text wrap may be needed around the logo/image)</p> <p>Use other features (colour, bullets, tables) to make information stand out so that all detail is clear and easy to see. Ensure that the document meets the need of the audience (e.g. in a flyer for a school disco, language and images should be appropriate for that age range and purpose)</p>
	c Process numbers to meet needs	<p>Understand use of spreadsheets to process numeric data. Different cell data types (e.g. text, number, date), cell ranges (on a single dimension, e.g. A1:A11)</p> <p>Use formulae with a single operator (e.g. +, -, /, *), SUM function (and), structure/ layout of worksheet</p>	<p>Use a formula to calculate the total cost of several items (in a row or column)</p> <p>Make sure the data is clear and easy to read, all columns are wide enough to display all data within cells, headings stand out and document is fit for purpose</p>

Entry Level 3

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Skill standards	Coverage and range	What does this mean?	Example
Developing, presenting and communicating information 7. Bring together different types of information for a given purpose	a For print and viewing on screen	Organise information of different forms (text, images, numbers) to achieve a purpose Use headings, bullets and paragraphs to make sure all text and images are balanced and sized appropriately	Enter a relevant header or title that describes the content of a poster or flyer. Use the 'print preview' feature within software to make sure that the poster or flyer (with combined information of image, text and number) is fit for purpose
	b Check for accuracy and meaning	Use spellcheck (ensure it is the UK version) and proofread to make sure that the content of the work is acceptable and error free	Check the content of a poster or flyer to make sure that it all makes sense and contains all the necessary information
	c Check suitability of information	Seek views of others to make sure that the tone and language meets the needs of the intended audience	Ask tutor and/or peers to comment on work
Developing, presenting and communicating information 8. Use ICT-based communication	a Read, send and receive electronic messages	Know how to use email, text messaging, social networking and instant messaging. Open and save a file and know how to respond with a reply	Receive, open and read an electronic message with attachments from friends or colleagues Reply to an email to say that it has been received successfully
	b Use contacts	Contact details include phone numbers and email addresses	Find the contact email address of the events manager from the given list and send them an email
	c Understand the need to stay safe and to respect others when using ICT-based communication	Understand how to avoid the potential risks involved in using ICT-based communications (e.g. not sharing address or phone number in a chat room or when social networking) and the need to respect others when using ICT-based communication Do not give out other people's details or photographs without permission, nor make inappropriate comments about another person on a website or social media. Be aware of the risks of chatting to strangers and never arrange to meet someone alone	Follow a code of conduct when using social media

Level 1

Skill standards

Using ICT (20-30%)

1. Identify the ICT requirements of a straightforward task
2. Interact with and use ICT systems to meet requirements of a straightforward task in a familiar context
3. Manage information storage
4. Follow and demonstrate understanding of the need for safety and security practices.

Finding and selecting information (10-20%)

5. Use search techniques to locate and select relevant information
6. Select information from a variety of ICT sources for a straightforward task.

Developing, presenting and communicating information (50-70%)

7. Enter, develop and refine information using appropriate software to meet requirements of straightforward tasks
8. Use appropriate software to meet requirements of straightforward data-handling tasks
9. Use communications software to meet requirements of a straightforward task
10. Combine information within a publication for a familiar audience and purpose
11. Evaluate own use of ICT tools.

Level 1

Skill standards		Coverage and range	What does this mean?	Example
Using ICT	a	Use ICT to plan and organise work	<p>Given a straightforward task, be able to identify what needs to be completed and what is needed in terms of software and hardware</p> <p>Show how to make a decision about the best software to use to complete a given task and to solve a given problem.</p> <p>Learners need to plan their choice of software based upon the requirements of the problem to be solved. Carry out a particular task considering time, convenience and cost</p>	<p>Extract information from pre-prepared data (e.g. file containing the monthly income and expenditure for a local business, for 3 consecutive months)</p> <p>Use ICT facilities, choosing appropriate software (spreadsheet) and features (formulae/functions) to help determine which was the best month for sales, which was the best selling item overall and what the gross profit is</p>

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Skill standards	Coverage and range	What does this mean?	Example
Using ICT 2. Interact with and use ICT systems to meet requirements of a straightforward task in a familiar context	a Select and use software applications to meet needs and solve straightforward problems	Know about common software such as word processor, spreadsheet, presentation and graphics (any application that allows learners to insert, size, and crop/position images) Images to be resized ensuring they are not truncated and images to be positioned in documents Enter, develop and format text, tables, graphics, records, numbers, graphs, charts Process numerical data Display numerical data in graphical format Organise data using data types and field names Enter, add, edit, delete, search, sort data Combine text, image and number within a document (file) Read, send and receive electronic messages with attachments Print output showing final product as well as workings (screen shots, formula view)	Choose the most appropriate software to carry out a straightforward task (e.g. amend sales figures and costs and work out calculations using a formula within a spreadsheet) Write a summary document, e.g. letter, using word processing software Show the searches/techniques used by using screen capture/ screen print and pasting into a document ensuring that the screen shots are legible when printing Use email to keep in touch with friends, to send and receive documents and photographs File emails with appropriate messages, images and documents Save spreadsheets in data view and in formula view for future reference Print images, documents and spreadsheets Create a short presentation for a given audience
	b Select and use interface features effectively to meet needs	Know and use desktop icons, dialogue boxes, menus, toolbars, scrollbars, option buttons, links/ hotspots, drag and drop, copy and paste, cut, zoom, minimise and maximise	Write an article for a newspaper or magazine using given text. Choose from appropriate images and insert charts. Ensure layout is fit for purpose and meets the requirements of the given task. Proofread article
	c Adjust system settings as appropriate to individual needs	Know that ICT systems can be changed to suit individual needs - e.g. text or windows can be made larger for easier reading. Mouse speed settings can be altered for preference or comfort, and left and right mouse buttons can be swapped	Review documents by changing window size, mouse settings, icon size, brightness, background colour (wallpaper), contrast and volume

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Skill standards		Coverage and range	What does this mean?	Example
Using ICT				
3. Manage information storage	a	Work with files, folders and other media to access, organise, store, label and retrieve information	<p>Name files appropriately and save securely. Practise across different software applications, such as spreadsheet and word processor</p> <p>Create, open, save, save as (e.g. save files with different filenames to assist version control), print and close files, create folders, name files and folders appropriately</p> <p>Password-protect files</p> <p>Copy and move files between folders</p> <p>Copy or backup files to CD, DVD, memory stick, hard drive. Insert, remove, label and store media safely</p>	<p>Create and use folders and subfolders, using meaningful file names, and save files to various folders and memory stick (or other media) for future reference</p> <p>Digitally label a USB memory stick (or other media) for future reference</p>

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Skill standards	Coverage and range	What does this mean?	Example
<p>Using ICT</p> <p>4. Follow and demonstrate understanding of the need for safety and security practices</p>	<p>a</p> <p>Demonstrate how to create, use and maintain secure passwords</p>	<p>Know it is important to keep information secure by using a password that cannot be guessed easily by another person. Password to be 'strong', i.e. made up of upper- and lowercase letters, numbers and special characters. If using multiple passwords, ensure they are different. Change password regularly (or when security may have been breached). Keep password secret</p> <p>Understand the need to stay safe (e.g. not sharing addresses or phone numbers in a chat room or social media) and to respect others when using ICT-based communication (e.g. not giving out other people's details or making inappropriate comments about another person on a website or social media)</p>	<p>Avoid inappropriate disclosure of personal information, avoid misuse of images (e.g. editing images inappropriately and broadcasting inappropriate images on the internet), use appropriate language, respect confidentiality, use copy lists with discrimination (e.g. use of bcc to avoid sharing email addresses with others)</p> <p>Apply a password to a file to protect its sensitive information (e.g. a contacts list with personal information)</p>
	<p>b</p> <p>Demonstrate how to minimise the risk of computer viruses</p>	<p>Understand the risk posed by a virus infiltrating an ICT system.</p> <p>Take precautions by:</p> <ul style="list-style-type: none"> • using up-to-date virus-checking software • treating files from unknown sources with caution • being cautious when accessing unknown websites (clicking on hyperlinks) • be alert to phishing emails 	<p>Activate virus-checking software to make sure files are free from virus infection</p> <p>Be aware of suspicious files from an unknown source and do not open or run unknown software in case of infection</p>

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Skill standards		Coverage and range	What does this mean?	Example
Finding and selecting information 5. Use search techniques to locate and select relevant information	a	Use of search engines to answer queries	Access and navigate the internet and use search engines to browse, move back and forward, use links and find specific information to help solve straightforward problems Know how to use bookmarks	Use search criteria such as 'earthquakes 2010', to locate information about earthquakes in that year. Search within results to find specific information about, for example, the Haiti earthquake that occurred on 12 January 2010
Finding and selecting information 6. Select information from a variety of ICT sources for a straightforward task	b	Recognise and take account of currency, relevance, bias and copyright when selecting and using information	Have access to and be able to use a variety of sources of information (e.g. electronic newspapers, CDs, podcasts, databases, files, clip art) Know about copyright constraints on the use of information and images Identify validity by considering such things as: <ul style="list-style-type: none"> • age of information • intention and authority of provider • currency of the information • its relevance and bias 	Decide which sources of information are most reliable and trustworthy when researching information (e.g. finding something in Wikipedia is a good starting point, but find alternative sources to verify) Avoid plagiarism, acknowledge source to avoid copyright infringement. Be careful only to use copyright with permission from the author

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Skill standards		Coverage and range	What does this mean?	Example
<p>Developing, presenting and communicating information</p> <p>7. Enter, develop and refine information using appropriate software to meet requirements of straightforward tasks</p>	<p>a</p>	<p>Apply editing, formatting and layout techniques to meet needs, including text, tables, graphics, records, numbers, charts, graphs or other digital content</p>	<p>Enter text, images and numeric information and organise it so that it is fit for purpose</p> <p>Make changes where necessary and improve layout by: changing margin sizes (top, bottom, left and right); header; footer; portrait, landscape (i.e. page orientation); page breaks (i.e. insert and delete page breaks using software); page numbering (i.e. insert, position and delete page numbers using software). Use headers and footers to include dates, page numbering and text such as name or filename</p> <p>Use bullets, numbering, alignment, tabs (left, right, centre), line spacing, colour, font, style, size, simple tables. Insert and delete tables, define number of columns and rows, insert and delete columns and rows, adjust column width, apply and remove cell borders, horizontally align information</p> <p>Obtain, insert, size, crop, position and align (left, right, centre) images that are fit for purpose from clip art, photo, scanned image, from other source</p> <p>Delete and/or change text: headings, lists and tables. Use highlight, drag and drop, find, replace, undo and redo</p> <p>In tables/spreadsheets, know how to insert and delete rows and columns, amend entries, enter column headings and row labels, field selection (i.e. single field), data sort (i.e. alphabetic sort or numeric sort or alphanumeric sort), filter (i.e. using a single text or numeric criterion)</p> <p>Know how to display numerical data in a pie chart, bar chart, single line graph, with appropriate formats, titles, axis titles and legends</p> <p>Use graphical, audio and video software</p>	<p>Use appropriate page layout and format text to maximise clarity and enhance presentation of a publication (e.g. poster, flyer or brochure)</p> <p>Format numerical information appropriately e.g. currency, percentage, number of decimal places, and make sure that all information is appropriately displayed making use of cell data types (i.e. text, number, date) using suitable labels</p> <p>Use other digital content such as video or audio within an electronic presentation</p>

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Skill standards	Coverage and range	What does this mean?	Example
<p>Developing, presenting and communicating information</p> <p>8. Use appropriate software to meet requirements of straightforward datahandling tasks</p>	<p>a</p> <p>Process numerical data</p>	<p>Know how to use a spreadsheet</p> <p>Enter headings and numerical data with structure, increasing the column width where necessary</p>	<p>Create and use spreadsheets with meaning and purpose when presenting information, e.g. for budgets, sales figures, forecasting purposes</p> <p>Recognise data cell ranges in columns (as A1:A21) and in rows (as A1:H1) and understand the formula required for the task in hand</p>
	<p>b</p> <p>Display numerical data in graphical format</p>	<p>Use cell ranges (i.e. on a single dimension, e.g. A1:A11)</p> <p>Enter, edit and use formulae with a single operator (i.e. +, -, /, *), SUM, MIN, MAX, AVERAGE, COUNT functions. Formula view must be used and efficient formulae should be used (i.e. not =1+B1+C1)</p>	
	<p>c</p> <p>Use field names and data types to organise information</p>	<p>Replicate formulae</p>	
	<p>d</p> <p>Enter, search, sort and edit records</p>	<p>Structure layout of worksheet (i.e. adjust column width to show formulae, use gridlines and show row and column headings)</p> <p>Displaying formulae used</p>	

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Skill standards		Coverage and range	What does this mean?	Example
Developing, presenting and communicating information 9. Use communications software to meet requirements of a straightforward task	a	Read, send and receive electronic messages with attachments	Know how to access, read, create, and respond appropriately to email and other ICT-based communication, including attachments, and adapt style to suit audience	Send a photograph of an event to a relative ensuring the message uses language and tone to suit
	b	Demonstrate understanding of the need to stay safe and to respect others when using ICT-based communication	Know about the potential risks involved in using ICT-based communications (e.g. not sharing address or phone number in a chat room and social media) and to respect others when using ICT-based communication. Do not give other people's details or photographs without permission, nor make inappropriate comments about another person on a website or via social media	Show an understanding of the potential risks of divulging any personal information Avoid chatting with unknown people and do not arrange to meet strangers privately
Developing, presenting and communicating information 10. Combine information within a publication for a familiar audience and purpose	a	Print and view on screen	Know how to combine information in a meaningful way within a purposeful activity such as producing a flyer, a poster, a letter, an information sheet or newsletter, a ticket, an invitation, an advert, or a news article Within the activity know how to change fonts, font sizes and font styles. Organise text appropriately in paragraphs. Use bulleted and numbered lists where appropriate	Recognise the difference between various publications and know the different layouts and style to use for each type, e.g. be able to set the layout for a letter to show the standard information, such as date, address of sender, receiver's address (if formal) and appropriate salutations such as 'Dear John' and 'Yours sincerely' In a multi-page document use headers and footers, page numbering, date and the name or document filename, ensuring filenames are meaningful
	b	Check for accuracy and meaning	Act independently and take responsibility for own work to ensure that it is error free and makes sense	Make use of spellchecking facilities, ensuring it is the English UK version and proofread to check that the content is error free and that it reads clearly and with meaning

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Skill standards		Coverage and range	What does this mean?	Example
<p>Developing, presenting and communicating information 11. Evaluate own use of ICT tools</p>	<p>a</p>	<p>Evaluate at each stage of a task and at the task's completion</p>	<p>Know how to check that the best use of ICT tools has been made (e.g. a grid of values may be displayed within a table, rather than with tabs)</p>	<p>Identify how best to display results by choosing a table for clarity and structure, or a line graph over a chart to show changes over time for costs, temperatures, etc. However results are displayed, it must be appropriate for the purpose and meet the audience's needs. Take into account the layout overall, including fonts, size, colour, legibility, spelling and use of white space</p>

Level 2

Skill standards

Using ICT (20-30%)

1. Plan solutions to complex tasks by analysing the necessary stages
2. Select, interact with and use ICT systems safely and securely for a complex task in non-routine and unfamiliar contexts
3. Manage information storage to enable efficient retrieval.

Finding and selecting information (10-20%)

4. Use appropriate search techniques to locate and select relevant information
5. Select information from a variety of sources to meet requirements of a complex task.

Developing, presenting and communicating information (50-70%)

6. Enter, develop and refine information using appropriate software to meet requirements of a complex task
7. Use appropriate software to meet requirements of a complex data-handling task
8. Use communications software to meet requirements of a complex task
9. Combine and present information in ways that are fit for purpose and audience
10. Evaluate the selection and effectiveness of ICT tools and facilities used to present information.

Level 2

Skill standards		Coverage and range	What does this mean?	Example
<p>Using ICT</p> <p>1. Plan solutions to complex tasks by analysing the necessary stages</p>	<p>a</p>	<p>Use ICT to plan and analyse complex or multi-step tasks and activities and to take decisions about suitable approaches</p>	<p>Plan and carry out multi-step tasks.</p> <p>Separate the components of a problem and identify the relevant ICT requirements in order to apply knowledge and understanding to produce an appropriate solution to meet a variety of needs (i.e. non-routine and non-familiar contexts)</p> <p>Know how to select appropriate methods and software applications to be used. Ensure that the software selected is appropriate for the final outcome and meets the needs of the audience (i.e. a letter and mail merge is created in Word, as PowerPoint would not allow the mailmerge process)</p> <p>Identify all information that may be required</p> <p>Identify potential difficulties and know how to work towards solving them</p>	<p>Plan to use the ICT tools to carry out a particular task</p> <p>Use a variety of scenarios involving a problem or a task requirement. Work in groups and/or individually to understand what is involved and plan an approach to solving the problem (e.g. using ICT to plan and implement a promotional campaign)</p> <p>Use a range of applications such as word processor, spreadsheet, internet and email to come up with a solution</p>

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Skill standards		Coverage and range	What does this mean?	Example
<p>Using ICT</p> <p>2. Select, interact with and use ICT systems safely and securely for a complex task in non-routine and unfamiliar contexts</p>	a	<p>Select and use software applications to meet needs and solve complex problems</p>	<p>Understand what software to use to solve a given problem efficiently. Demonstrate how to use different software with optimum results (e.g. spreadsheet, database, word processor, PowerPoint, graphics, internet browser, search engine, email, audio and video software)</p> <p>Know about common software such as word processor, spreadsheet, email, graphics (software that allows learners to insert, size, crop and position images), internet browser, search engine, email, audio and video software. Be able to:</p> <ul style="list-style-type: none"> • enter, develop and format text, tables, graphics, records, numbers, graphs, charts • process and analyse numerical data • display numerical data in graphical format • organise data using data types and field names • enter, add, edit, delete, search and sort data • combine and present within a publication information including text, image and number, tables and graphics • organise and use contacts and organise, read, send and receive electronic messages with attachments • understand the need to protect some data with passwords <p>Print output showing final product as well as workings (screen shots, formula view)</p> <p>Identify and know the main purposes and advantages of different application software and their similarities</p>	<p>Choose the most appropriate software to carry out a complex task by breaking it down into smaller chunks (e.g. stages of planning a holiday, investigating climate change, setting up a small business)</p> <p>Use the internet and/or other sources as appropriate to search for and find relevant information (e.g. investigating healthy eating) Break down a complex problem and identify which software and hardware is necessary to solve the problem (e.g. presenting the results for a promotional campaign)</p> <p>Write summary documents (e.g. report or briefing paper using word processing software)</p> <p>Show the searches and techniques used, by using screen capture/screen print and either pasting into a document or printing</p> <p>Use email to send and receive documents, photographs and files with an appropriate message about the attachments. Use an email program to manage contacts (add or amend a contact and update)</p> <p>Print an image, document or spreadsheet file in data view and in formula view</p> <p>Identify that when costs and/or calculations for a number of items are required, the most appropriate choice of software would be spreadsheet. Where there is a large volume of data, which requires categorising, grouping and reporting on, the most appropriate software is a database. Be able to apply the same principles to other commonly used software</p>

Level 2

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Skill standards	Coverage and range	What does this mean?	Example
	b Select and use a range of interface features and system facilities effectively to meet needs	<p>Know and use desktop icons, dialogue boxes, menus, toolbars, scrollbars, option buttons, links/hotspots, drag and drop, copy and paste, cut, zoom, minimise, maximise, templates and wizards</p> <p>Know how to change software settings such as page orientation, margins, page size</p>	<p>Identify and use various interface features to be able to prepare or review documents reporting on non-familiar subjects.</p> <p>Research to find suitable information from various sources and use copy and paste, adjust margins, paper size and orientation to produce documents (e.g. a newsletter for a local community)</p>
	c Select and adjust system settings as appropriate to individual needs appropriate to individual needs	<p>Know how and when to adjust systems settings to meet individual needs, e.g. text or windows can be made larger for easier reading. Mouse speed settings can be altered for preference or comfort, and left and right mouse buttons can be swapped. Also consider icon size, screen resolution, desktop contrast, volume, date and time and system settings, such as printer selection</p>	<p>Explore system settings (as much as organisational network restrictions permit)</p> <p>Carry out adjustments to systems settings to meet specific needs</p> <p>Produce a screen shot, making sure that it is clear and all the detail clearly visible. Adjust its size and print</p>
	d Respond to ICT problems and take appropriate action	<p>Have awareness about potential problems when using a computer and know which problems can be dealt with and which will need expert assistance. Know when a problem exists and what to do to help resolve it. Problems may include: software freeze, virus threat, insufficient storage, paper jam, uninstall software. Know when and whom to ask for help and support and respond appropriately to error notification</p>	<p>Respond to error message and know when to fill the printer with paper, release a paper jam, deal with loss of internet connection and know when to ask for support</p>
	e Understand the danger of computer viruses and how to minimise risk	<p>Understand the risk posed by a virus infiltrating an ICT system. Understand that the use of applications on smartphones and tablets leads to the collection of personal data that can be passed on to third parties. The UK Data Protection Act does not cover us for countries outside of the UK</p> <p>Take precautions by:</p> <ul style="list-style-type: none"> • using up-to-date virus-checking software • treating files from unknown sources with caution 	<p>Activate virus-checking software to make sure the files are free from viruses</p> <p>Be aware of suspicious files from an unknown source and do not open or run unknown software in case of infection</p>

Level 2

Continued from previous page:

Skill standards		Coverage and range	What does this mean?	Example
<p>Using ICT</p> <p>3. Manage information storage to enable efficient retrieval</p>	<p>a</p>	<p>Manage files, folders and other media storage to enable efficient information retrieval</p>	<p>Work with files and folders using meaningful naming conventions for files and save securely. Practise across different software applications, such as spreadsheet and word processor</p> <p>Know how to create, open, save, save as (save files with different filenames to assist version control), print, view and close files, create folders, name files and folders appropriately, rename, move and copy files and folders. Insert, remove, label and store media safely</p> <p>Password-protect files</p> <p>Copy or back up files to CD, DVD, memory stick or external hard drive. Insert, remove safely, label and store media safely</p>	<p>Create and use folders and subfolders. Use meaningful file names and save files to various folders or USB memory stick (or other media). Organise work so that it can be located easily in suitably named folders. Digitally label a USB memory stick (or other media)</p> <p>Apply a password to a file and show a screen shot of the process as validations</p>
<p>Finding and selecting information</p> <p>4. Use appropriate search techniques to locate and select relevant information</p>	<p>a</p>	<p>Search engines, queries and AND/NOT/OR, >, <, >=, <=, contains, begins with, use of wild cards</p>	<p>Access and navigate the internet and use search engines, move back and forward, use links and find specific information to help solve a straightforward problem</p> <p>Know how to use bookmarks</p> <p>Demonstrate use of multiple search criteria using text, number, quotation marks, search within results, relational operators (i.e. >, <, =, <>, >=, <=), logical operators (i.e. AND, OR, NOT), find or search tools including wildcards (i.e. * and ?) within software. Access, navigate and search internet sources of information purposefully and effectively</p>	<p>Enter a web address, use a search engine, search on the web for specific information using AND/NOT/OR or other variants in order to minimise the search results</p>

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Continued from previous page:

Skill standards		Coverage and range	What does this mean?	Example
<p>Finding and selecting information</p> <p>5. Select information from a variety of sources to meet requirements of a complex task</p>	a	<p>Recognise and take account of copyright and other constraints on the use of information</p>	<p>Have access to and be able to use a variety of sources of information (e.g. electronic newspapers, CDs, podcasts, databases, files, clip art)</p> <p>Know about copyright constraints on the use of information and images, and plagiarism i.e. the implications of the Data Protection Act 1998. Understand the 8 principles of the Act and personal rights and responsibilities when storing personal information using ICT, or publishing information on a website</p> <p>Identify validity by considering such things as:</p> <ul style="list-style-type: none"> • age of information • intention and authority of provider • currency of the information • its relevance and bias 	<p>Use a number of different sources to meet the requirements of the task</p> <p>Recognise examples of bias in results (often for commercial or political reasons), use methods of checking for accuracy – comparison with other sources, consideration of the credibility of the source</p> <p>When using music video downloads, be able to understand the legal requirements, always acknowledge sources of information, avoid plagiarism, and understand provisions of the Data Protection Act 1998</p> <p>Check for relevance in returned internet search results and be able to select what is relevant</p>
	b	<p>Evaluate fitness for purpose of information</p>	<p>When selecting from various sources, know what is relevant to the given task. Make sure that all work is written in the appropriate tone and language to suit purpose and audience. Use techniques such as proofing and reviewing</p> <p>Know to check for accuracy – by comparing with other sources and considering the credibility of the source. Check that sources are up to date and note when the information was last updated. This is particularly relevant when sourcing information on law or education where changes can take place regularly</p>	<p>When searching the internet for information, know that while a source such as Wikipedia is a good starting point, information found should be substantiated (confirmed) by referencing at least one other source</p>

Level 2

Continued from previous page:

Skill standards		Coverage and range	What does this mean?	Example
<p>Developing, presenting and communicating information</p> <p>6. Enter, develop and refine information using appropriate software to meet requirements of a complex task</p>	a	<p>Apply a range of editing, formatting and layout techniques to meet needs, including text, tables, graphics, records, numerical data, charts, graphs or other digital content</p>	<p>Enter text, images and numeric information and organise so that it is fit for purpose</p> <p>Make changes where necessary and improve layout by using:</p> <ul style="list-style-type: none"> • highlight • drag and drop • find and replace • undo • redo • changing margins (top, bottom, left and right) • insert columns • change column size • adjust spacing • create and edit header/ footer • use paragraph alignment (left, right, fully justified, centre) • portrait/landscape (page orientation) • page breaks (insert and delete page breaks using software facilities) • page numbering (insert and delete) <p>Use bullets, numbering, alignment, tabs (left, right, centre), line spacing, colour, font, style and size</p> <p>Create tables and spreadsheets (insert and delete tables in a publication), define number of columns and rows, insert and delete columns and rows, adjust column width and row height, apply and remove cell borders, horizontally and vertically align information, delete and/or change text, apply headings, merge and split and shade cells to enhance presentation</p>	<p>Prepare reports and similar complex documents for external use</p> <p>Organise and structure complex information over a number of pages using appropriate document layout with headings and subheadings, bulleted and/ or numbered lists, tables and images in a manner fitting the requirement. Edit, drag and drop, find, replace, undo and redo, highlight, use existing templates, in complex documents</p> <p>Use tables/spreadsheets to insert and delete rows and columns, amend entries, enter column headings and row labels, and use field selection</p> <p>In complex documents, know when to use columns (set number of columns, set column size, set size of gap between columns, display separator line), margins (top, bottom, left and right), header, footer, portrait, landscape, page breaks (insert and delete page breaks using software facilities), page numbering (insert and delete page numbers using software facilities)</p>

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Continued from previous page:

Skill standards		Coverage and range	What does this mean?	Example
	a (cont'd)	Apply a range of editing, formatting and layout techniques to meet needs, including text, tables, graphics, records, numerical data, charts, graphs or other digital content	<p>Obtain, insert, size, crop and position and align (left, right, centre) images that are fit for purpose. Group and position using wrapping (and front/back), draw, colour, fill, outline objects</p> <p>Know how to display numerical data:</p> <ul style="list-style-type: none"> • in a pie chart • in a bar chart • in a single line graph • with appropriate format, title, axis titles and legend <p>Use graphical, audio and video software</p>	Enhance final presentation of simple and complex documents by using bullets, numbering, sub-numbering, paragraph indents and justification, tabs (left, right, centre, decimal), line spacing, colour, font, style, size, inserting borders (image, page or text). Document must be fit for purpose and meet the needs of the audience. Data must be clearly legible and layout must be consistent. No big white spaces

Level 2

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Skill standards		Coverage and range	What does this mean?	Example
	b	Display numerical data in appropriate graphical format	<p>Know how to create pie and bar charts and single and multiple line graphs using a suitable data set. Use meaningful titles, labels and legends</p> <p>Select data from separated columns and rows (e.g. non-contiguous)</p> <p>Produce a printout, with or without the associated spreadsheet</p>	<p>Display data (or a subset of data) in a pie or comparative bar chart or a line (multiple) graph, and know which is most appropriate for the context. Select data from a dataset that is not held adjacent. Produce the result as a printout either on the same page as the data or on a separate page</p>
	c	Use appropriate field names and data types to organise information	<p>Know how to enter and organise data by applying suitable field names and types to suit the data. Data types to include text, number, date and currency</p> <p>Know how to organise data in a structured way by setting up column and row headings to identify and locate data and understand about using a primary key where appropriate</p>	<p>Organise data to meet purpose. For example, within a spreadsheet, create data in rows and columns so that it can be easily read and understood. Within database software, edit field names and types of data structure as necessary</p> <p>Recognise when a spreadsheet is suitable to store and organise dates and when a full database would be more appropriate</p>
	d	Analyse and draw conclusions from a data set by searching, sorting and editing records	<p>Know how to sort structured information in ascending or descending order on single or multiple fields</p> <p>Know how to make changes to existing data, add records and delete records or fields</p> <p>Search and find data using multiple criteria search and filter, using relational operators =, <, >, <>, <=, >= and logical operators AND/OR/NOT, begins with, s and wild cards</p> <p>Know about database principles and the meaning of fields, records, queries and reports. Understand which application best meets the task in hand</p> <p>Know how to import data from an external source such as a text document or a spreadsheet</p>	<p>Display a set of data in different ways, for example ascending in order of surname (A-Z) and descending in order of date (oldest first)</p> <p>Filter existing datasets for specific records. For example, all with a surname of Kelly and a date of birth on or after 1 Jan 2000. [Surname = "Kelly" AND DOB >= 01/01/2000]</p> <p>Carry out a mail merge using an existing letter that you have amended to suit the purpose of the task. Data for the mail merge is in a .txt document. This document must be exported to a spreadsheet as it has to be manipulated before the mail merge process (e.g. only sending it to people that have expressed an interest). Once data has been defined then the mail merge process can take place</p>

Level 2

Continued from previous page:

Skill standards		Coverage and range	What does this mean?	Example
Developing, presenting and communicating information 8. Use communications software to meet requirements of a complex task	a	Organise electronic messages, attachments and contacts	<p>Know how to access, read, create, and respond appropriately to email and other ICT-based communication, including attachments, and adapt style for audience</p> <p>Know how to create and maintain folders, delete redundant messages, add, amend and delete contact entries</p>	<p>Open mailbox, read, reply, forward, communicate using from, to, cc. Use subject and content fields, add, and open and save attachments. Use email facilities to send a file as an attachment with a suitable message</p> <p>Receive an email and attachment, open and save the file in an appropriate place (folder) and respond to acknowledge receipt</p>
	b	Use collaborative tools appropriately	<p>Understand that ICT enables collaborative working. The use of collaborative working includes tools to allow the user to highlight information, track changes, and record comments.</p> <p>Know that various ICT tools exist for this purpose and can facilitate complex designs by using shared screen in real time across continents. Within common usage, these tools include VoIP such as Skype, wikis and email</p>	Use appropriate ICT tools that are available to negotiate and plan solutions for a complex task
	c	Understand the need to stay safe and to respect others when using ICT-based communication	<p>Understand the importance of staying safe online, by not sharing addresses, phone numbers or other personal information in chat rooms or on social media. Respecting others when using ICT-based communication by not giving out other people's details or making inappropriate comments about individuals or organisations on websites or social media.</p> <p>Know about the ethics and moral issues surrounding cyber-bullying to understand the importance of the topic</p>	<p>Know when it is appropriate to disclose personal information. Avoid misuse of images (e.g. editing images inappropriately and broadcasting inappropriate images on the internet), use appropriate language, respect confidentiality, use copy (contact) lists with discrimination</p> <p>Know it is important to keep information secure by using a password that cannot be guessed easily by another person (use special characters, upper- and lowercase text, numbers). Be able to change password regularly (or when security may have been breached). Keep password secret</p>

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Continued from previous page:

Skill standards		Coverage and range	What does this mean?	Example
<p>Developing, presenting and communicating information</p> <p>9. Combine and present information in ways that are fit for purpose and audience</p>	a	Organise and integrate information of different types to achieve a purpose, using accepted layouts and conventions as appropriate	<p>Know how to combine information in a meaningful way within a purposeful activity, such as producing a flyer, poster, letter, information sheet or newsletter, ticket, invitation, advert, news article or a mail merge</p> <p>Know how to combine different types of information including text, number, charts, graphics, tables, images, multimedia, sound and video</p> <p>Know how to produce a screen shot/screen capture of a database structure</p> <p>Know how to produce presentation slides as handouts</p>	<p>Within an activity know how to change fonts, font sizes and font styles. Organise texts appropriately in paragraphs. Use bulleted and numbered lists where appropriate. Understand the differences between various publications and know the different layouts and styles to use for each type. For example, be able to set the layout of a letter to show the standard information such as date, address of sender, receiver's address (if formal) and appropriate salutations such as 'Dear John' and 'Yours sincerely'</p> <p>In a multi-page document use headers and footers, page breaks and numbering</p>
	b	Work accurately and check accuracy, using software facilities where appropriate	Act independently and take responsibility to ensure that own work is error free and makes sense	Make use of spellchecking (ensure it is the English UK version) and grammar checking facilities and proofread to check that the content is error free and that it is clear, consistent and correct
<p>Developing, presenting and communicating information</p> <p>10. Evaluate the selection and effectiveness of ICT tools and facilities used to present information</p>	a	At each stage of a task and at the task's completion	Know how to check that the best use of ICT tools has been made, e.g. know that it's best to use a spreadsheet rather than a database for collecting data which can then be shown as a graph	<p>Identify how best to display results in different types of documents, depending on their purpose. Choose a table for clarity and structure. Choose a line graph instead of a chart to show changes over time</p> <p>Ensure that the document is fit for purpose, meets the needs of the audience and has been proofread. Evaluate the use of fonts, sizes, colour, sizes of images, etc, to ensure it is clear and easy to read. Do not have big white spaces. Ensure the document meets the requirements of the task</p>

This is a typical functional ICT question at Level 2 and shows how the 3 interrelated skills are combined to assess learners:

Your manager has asked you to produce a poster to be displayed in his restaurant.

The poster must:

- **inform people about the food values of a fish and chips meal**
- **help to sell the meal.**

Your manager wants the poster to:

- **be on one A4 page**
- **use all the text supplied in the email (this is in a previous question in the paper)**
- **display both images in the files that were attached to the email**
- **use labels, or some other means, to identify each of the main ingredients in the image of the fish and chips meal. The labels must also show the food values found in Activity 3 (this is a previous question within the paper).**

Your poster should:

- **include a table with at least 3 columns and 3 rows, used for an appropriate purpose**
- **be fit for purpose - as a poster, it should draw people's attention**
- **be easy to read**
- **be free of errors.**

Sample ICT Level 2 question

Marks will be awarded as follows:

Using the standards	Acceptable answers	Marks awarded
<p>Using ICT:</p> <p>Identify the program to be used in order to solve the problem. File to be saved with an appropriate name</p>	<p>Word or Publisher are appropriate programs to use in order to create the poster. PowerPoint should be avoided as it is a presentation program. File name should be saved with an appropriate name relating to the task, 'doc1' is not acceptable</p>	<p>1 mark for saving the file with an appropriate name</p>
<p>Using ICT:</p> <p>File indicates which version it is as 3 versions are asked for within the task</p>	<p>3 file names should be visible, indicating 3 versions of the poster. Save using a version number or a time stamp</p>	<p>1 mark for evidencing 3 versions of the poster with appropriate indications of versions</p>
<p>Using ICT:</p> <p>File is saved in the work folder</p>	<p>Evidence of poster file saved in the work folder. Student cannot be penalised if poster has been saved with an inappropriate name but within work folder</p>	<p>1 mark for evidence of poster saved in correct area</p>
<p>Developing, presenting and communicating information:</p> <p>Poster must fit on one A4 page</p>	<p>Poster is correct size</p>	<p>1 mark for poster on one A4 page – no marks if poster is on more than one page</p>
<p>Developing, presenting and communicating information/finding and selecting information:</p> <p>Contains 'fish and chips' image and 'I love fish and chips' image</p>	<p>Images must be the ones given in the data file and not from internet. Images must be appropriately sized and positioned within the poster. Images must not be truncated or distort the text</p>	<p>1 mark for appropriately inserting each image</p>
<p>Developing, presenting and communicating information:</p> <p>Ingredients shown in image of fish and chips meal are clearly identified, together with food values from Activity 3 (e.g. by using drawn arrows and text boxes, or some other effective means)</p>	<p>It is important that candidates read and understand the instructions for this part of the task as there are potentially 4 marks lost if the task is not fully understood</p> <p>There are a number of ways to effectively identify the food values and link them to the image. Food values should be clearly and accurately displayed along with an effective means of linking them to the image</p>	<p>1-3 marks for an effective method but food values are incomplete (i.e. not all values labelled)</p> <p>1-2 marks awarded for correct food values but not linked to the image</p> <p>No marks awarded if food values are shown in body of text and not as information labels</p>

Sample ICT Level 2 question

Marks will be awarded as follows (continued):

Using the standards	Acceptable answers	Marks awarded
<p>Developing, presenting and communicating information:</p> <p>Table inserted into poster in an appropriate position</p>	<p>A table is inserted into the poster showing the opening times or the food values</p>	<p>1 mark for saving the file with an appropriate name</p>
<p>Developing, presenting and communicating information:</p> <p>Spelling errors corrected within source text from email</p>	<p>All incorrect spelling has been corrected</p>	<p>1 mark for evidencing 3 versions of the poster with appropriate indications of versions</p>
<p>Developing, presenting and communicating information:</p> <p>Document is fit for purpose</p>	<p>Appropriate fonts and text size used for easy reading. Not too small: font size of 12 plus should be used as a minimum for a poster</p> <p>There should be no large gaps of white space as all space should be used</p> <p>Formatting techniques such as colour, bold, borders, etc should be used to enhance the poster</p>	<p>Up to 2 marks awarded for the font size and the font itself</p> <p>1 mark is awarded for no big white gaps within poster</p> <p>1 mark is awarded for a formatting technique being used to enhance the poster</p>
<p>Developing, presenting and communicating information:</p> <p>Information presented in a logical sequence with correct relationship between titles and subtexts</p>	<p>Candidates must proofread the final document and make changes if necessary.</p> <p>The poster should show a logical sequence and titles and subtitles should be identified by the use of bold, underline, larger font, or italic, for example</p> <p>The information within the poster must read in a logical order and meet the needs of the audience</p>	<p>Up to 2 marks awarded for titles being correctly identified</p> <p>1 mark awarded for subtexts being correctly identified and linked to correct titles</p> <p>1 mark awarded if the information is in a logical sequence</p>
<p>Using ICT:</p> <p>Files show development of poster</p>	<p>The task asks for evidence of 3 files showing development of poster</p>	<p>2 marks awarded for the evidence of 3 files</p> <p>1 mark awarded for the evidence of 2 files</p> <p>If less than 2, no marks awarded</p>
<p>Developing, presenting and communicating information:</p> <p>Poster files show development</p>	<p>The 3 files must show development stages</p>	<p>1 mark awarded for the layout of text</p> <p>Up to 2 marks awarded for the formatting of text</p> <p>1 mark available for the formatting of images</p>

Glossary

Absolute cell reference: Absolute cell references in formulae are not altered when the formulae are moved or replicated to a different location in the spreadsheet. See relative cell reference.

Align (alignment): To position data (text, images) so that it lines up, either with other data (as in a column or a row), or relative to the margins of a page, or within a cell of a worksheet. Alignment can be horizontal (left, centre, right, full) or vertical (top, centre, bottom).

AND: Logical operator acting on two inputs: the outcome being TRUE if both inputs are TRUE.

Application software: A computer program or set of programs, for example word processor or spreadsheet, designed to carry out specific tasks, for example allowing the user to write letters, store names and addresses, manage finances or draw pictures.

Attachment: A file (or files) attached to an email by the sender, which can be read by the recipient. This could be a photo, or a document. The advantage of sending information as an attachment is that it can be prepared and saved before the email is sent.

Audience: The person or people for whom the work is designed. This refers to the person (such as a tutor) or people who will see and/or hear information that is given to them. This information can take the form of any ICT output, for example a report, email or slideshow.

AVERAGE: A spreadsheet function that calculates the arithmetic mean of a set of values, used in a formula in a cell.

bcc (blind carbon copy): In the context of email, blind carbon copy - abbreviated to bcc - refers to the practice of sending a message to multiple recipients in such a way that what they receive does not contain the complete list of recipients.

Backup (or back-up) file: A backup copy is a duplicate of a file, program or disk made on a separate storage medium. This can be used for recovery when the original file is lost or damaged. Backup files should be stored on secure media in a separate place from the original files.

Bookmark: Link to a web page which the user wants to be able to return to quickly and easily. Bookmarks are stored on the user's computer so that they are readily available.

Borders: Lines that can be displayed around a page, paragraph, a table, an image, spreadsheet cells or a text box to create impact. The top, bottom, left and right border lines can be individually manipulated or removed.

Broadband: This term has come to be used for any kind of internet connection with a download speed of more than 56 kbps. Broadband can carry several channels at once, hence it is possible to watch TV or receive telephone calls while using the internet.

Browse: To search for files on a disk by moving up and down the directory structure until a particular folder or file is located. Also, to follow links on the internet from one website to another (also called surfing).

Browser: An application which allows a person to read hypertext and to access, view and interact with web pages. The browser gives some means of viewing the contents of nodes (or pages) and of navigating from one node to another.

Bullet: A dot or other mark used at the start of each line in a list to add emphasis.

cc: In email, the abbreviation cc refers to the practice of sending a message as a 'carbon copy'; the receiver is not expected to reply or act.

Cell: The spreadsheet term for a single 'box' on a worksheet, identified by the cell reference, for example A4. The cell reference is where a row and a column intersect. A cell may contain data, such as a number, text or a formula; or it can be empty.

Cell range: A rectangular area of cells in a worksheet defined by the cell references of the 'corner' cells, for example A1:A5 or E4:G12.

Cell reference: In a spreadsheet, cells are arranged in rows (numbered 1, 2, 3, ...) and columns (lettered A, B, C, ...) and each cell has a unique cell reference, which identifies the cell in the spreadsheet. For example, C5 is the fifth cell down in column C. In a spreadsheet, when a formula in one cell is copied to other cells, it is replicated using either relative cell referencing or absolute cell referencing.

Chart: A graphical representation of numeric data, such as a pie chart or bar chart.

Glossary

Chart labels: Text labels that enable a chart to be understood. **Title:** the name given to a chart. **Legend:** identifies what each bar or pie slice represents in a chart. **Axis labels:** identify the quantities represented by the x- and y-axes. **Data labels:** identify the value of points on the x- and y-axes.

Clip art: Pictures, often cartoons, which are provided with software or on the internet and can be used.

Close: To end an application, for example by using the File/ Exit menu option, or to shut part of an application, for example a window by clicking the close box.

Column/row: In a spreadsheet, a line of single cells from top to bottom (column) or from side to side (row).

Communication services: A service provided for communication purposes, such as by an internet service provider, which supplies a broadband or dial-up connection to the internet or a computer network.

Communications: Messages between two parties, such as text messages or emails.

Complex task: A task that contains multiple steps. **Contact list/address book:** Electronic list of email addresses, usually held within the email software, similar to a phone book on a mobile phone. This makes email addresses much easier to access. Sometimes additional information such as postal addresses can be stored.

Copyright: Legal protection claimed by the owner of a design (document, graphical image, etc) that prohibits others from copying and reproducing the protected material, or passing it off as their own work.

Crop: To reduce the size of a graphical image by cutting off parts from the edges, leaving only the required part.

Currency: Applied to information: whether information is up to date, current.

Currency (format): Applied to numeric data in the format of, for example, £, \$.

Cut: To remove information (such as text, a table or a graphical image) from a document, or a range of cells from a spreadsheet. The deleted material is placed on the system clipboard and is therefore available to be inserted elsewhere.

Data type: In a spreadsheet or database, the type or kind of data contained in a cell or field.

Database: Large amount of information, normally structured in records.

Delete: To remove information, for example text from a document, cells in a worksheet, or records in a database.

Dialogue box: An onscreen window which gives a message and requires a response from the user. Contains buttons and/or fields for the user to make choices and to alter settings, for example to set the system time and date.

Dial-up connection: A method of temporarily connecting to the internet using a telephone line and modem in which the user connects to an internet service provider.

Document layout: The relationship (size, position, style and so on) between the elements forming a document.

Download: To copy a file from a location on the internet onto a local machine (for example a computer or a mobile phone) or onto a network.

Drag and drop: A way of editing objects (for example text or graphical images within a document) or organising files within folders, which involves selecting an item (for example using the mouse) and pulling it to another location.

Edit: To change (amend or alter), update, delete or rearrange information that is stored on a computer.

Email: Short for 'electronic mail'. A method of sending an electronic message to the mailbox of someone else who has suitable equipment and an email address. Email messages are sent from one computer user to another over a network, for example the internet, a mobile telephone network or digital TV.

Enter key: A key on the keyboard, sometimes referred to as the return key. In a document, pressing the enter key puts a line break into the text at the position of the cursor. In a dialogue box, pressing the enter key may operate a button, for example the OK or cancel button.

Glossary

Field: In a database, records are divided into separate areas called fields, each holding a single specified data item, for example a person's forename, surname, date of birth or telephone number. Field names may appear in queries or as the titles of the columns in a database table.

File: A store for data, for example a document, a graphical image, a spreadsheet or a database.

Filename: The name used to identify a file. The filename has an extension, which may be created automatically by the application, for example Photo47.jpg, and may be shown or hidden. The path name includes the drive and all folders leading to the file, for example C:/Photos/France/2007.

Filter: In a database or spreadsheet: to remove rows of data which are not required.

Fit for purpose: Work which is appropriate for the context and purpose for which it was produced. For example, a handwritten Post-it Note may be fit for the purpose of telling the milkman that no milk is required and may well be more appropriate than word processing a letter.

Folder: A filing structure allowing the user to organise information (files) in a discrete location for ease of retrieving them from a storage device at a later date. A folder is likely to contain sub-folders.

Font: A particular design or typeface of characters used for printed and displayed text. There are two main typefaces: serif, such as Times New Roman (which has 'feet' on each character); and sans serif, such as Arial (which is a 'cleaner' font, without feet).

Font size: The size of font that is displayed on a computer screen or printed on printed copy, for example 10-point, 12-point. **Font style:** the appearance of the font. Bold text appears heavier and darker than regular text; italic text slants upwards from left to right and underlined text has a line below it. Text may have one or more of these font-style attributes or be 'regular' and have none.

Footer: The area at the bottom of each page; information which appears in the area at the foot of each page of a printed document, for example page number, author, filename and date. This extra information may be included for labelling purposes. Information is only typed once but appears at the bottom of each page. Facilities such as page numbering in a header and footer can be an automatic function. See also header.

Formula: An entry, often used in a cell in a spreadsheet, used to calculate results. In a spreadsheet, it is expressed using mathematical symbols such as addition (+), subtraction (-), multiplication (x) and division (/), and functions such as AVERAGE and SUM showing how the contents of other cells are to be manipulated. A formula is recalculated whenever a value on which it depends changes.

Functions: A predefined calculation provided as a feature of the software application (for example within a spreadsheet) for particular operations on specified data, for example AVERAGE, SUM, MAX and MIN.

Grammar check: Tool provided in word processing software which can be set to check automatically for grammatical errors within the text of a document.

Graph/chart: An image created from a set of numbers to show a trend or relationship between two variables, for example a line graph. Some graphs may be referred to as charts, for example a bar chart or a pie chart.

Graphic/image: A picture or image in electronic form, for example photographs, scanned images, pictures and graphs.

Gridlines: Horizontal and/or vertical lines drawn from the axes to make reading the chart easier.

Grouping: A means of treating separate elements (objects), for example in a graphic, as a single object for the purpose of selecting, moving and sizing, etc. Grouped objects can be ungrouped.

Hardware: The parts of a computer that can be touched/handled, for example the mouse, the keyboard and the printer.

Header: An area at the top of each page; information which appears in the area at the top of each page of a printed document, for example title, page number or chapter number. This extra information may be included for labelling purposes. See also footer.

Glossary

Help facilities: A feature of applications software, usually accessed via a Help menu, that gives descriptions and examples of how to use the software, and has a search option to help the user to find information about the facilities and to solve some user problems.

Hotspot: An icon, part of a graphic or text within a web page, that allows a jump from that web page to another linked web page, or to another website. When the cursor is on a hotspot, a hand appears.

Icon: A small representative image, such as a picture or symbol, used to represent some object or function, for example a pair of scissors for the cut operation; a file folder for a directory; a magnifying glass for the zoom operation. Clicking on the icon is an event: this may result in an application being opened or some other action being carried out, depending on what the icon represents.

ICT-based sources: Any source of information which is stored and accessed electronically.

Information types: Different kinds of information for which the data are stored in particular formats, such as text, numbers, images and sound.

Input: Enter information into a comp

Input device: Hardware used to enter data into a computer, such as a mouse (and other point-and-click devices) or a keyboard.

Interact: Two-way communication through an ICT interface, for example the user entering a password and the system then giving the user access.

Interface: A boundary across which two systems communicate. An interface might be a hardware connector used to link other devices, or it might be a screen display used to allow communication between a device, a program, and a person. User interface features allow communication between the user and the system, for example the WIMP (windows, icons, menu, pointer) environment seen on a screen, messages (such as those shown in dialogue boxes) and audio communication (such as a beep to show the arrival of email).

Internet: Worldwide network of computers reaching millions of people, allowing global communication and information sharing on thousands of interconnected networks. Includes the hardware, the computers and the connections between them. The internet is not controlled by any single group or organisation. The most commonly used parts of the internet are email and the World Wide Web.

Landscape: One of two orientations – landscape and portrait – used to describe how material (text and/or images) is printed on a page or appears on a screen. The default, or normal, orientation on a printed page is portrait. Landscape orientation means that the lines of text are parallel to the longer side of the page.

Legend: The key on a graph or chart (American usage now prevalent in UK).

Link: a clickable point on screen which leads to another location, for example another web page. Links are shown as hypertext (underlined or highlighted in some way) or as a hotlink icon. When the user moves the cursor over the link, the arrow changes to a hand; double clicking then activates the link.

Log in: The process of signing on as a user to a computer system. Logging in may involve entering a user identification code and/or a PIN and, maybe, a password.

Logical operators: When searching a database, or the internet, to exclude or include words in a search using AND, OR, NOT. For example, 'King Charles NOT spaniels' to find information about a monarch not dogs. These mathematical terms can be used to create complex expressions from simple variables and values: AND, OR, NOT.

Mailbox: The directory or folder location where incoming email messages are stored by an internet service provider.

Margin: White space at the edge of a document.

MAX: A spreadsheet function that returns the largest value in the specified cell range.

Maximise: To increase the size of a window to fill the computer screen, usually by clicking on the middle of three boxes located at the top right-hand corner of the computer screen.

Glossary

Media: Material on which data can be stored, for example hard disk, floppy disk, CD-ROM, DVD or tape. The medium may be magnetic, paper, or rely on optical technology.

MEDIAN: A spreadsheet function that returns the median value of a specified cell range.

Medium: Singular of media.

Menu: A list of options offering functions and facilities such as File/Edit. On a computer screen, a menu bar may appear across the top of a window, listing all the menus available in that application. Menus can be 'pop-up' or 'pull-down' – and may offer submenus – any of which can be selected using a mouse click. On a mobile phone or digital camera, the menu may be accessed by a special button and then the options scrolled through and selected as required.

Merge cells: In a table or worksheet, to combine two or more adjacent cells into a single cell. In a spreadsheet, the information in all but one cell will be lost; in a table, the information is combined.

MIN: A spreadsheet function that returns the smallest value in the specified cell range.

Minimise: To reduce a window to an icon on the task bar (a way of 'closing' the window without closing the application) usually done by clicking on the leftmost of three boxes located at the top right-hand corner of the computer screen.

MODE: A spreadsheet function that returns the modal value of a specified cell range.

Mouse: Small hand-held point-and-click device used to select on-screen information or locations. Clicking may have a number of actions, depending on the software being used.

Multiple search criteria: Used to narrow down the volume of matches; a search that involves a number of criteria.

Navigate: To move from one location in the internet to another using links. To find the way through a website, using menus and links.

Non-ICT-based sources: For example, conversations with people, newspapers, television, maps.

NOT: Logical operator acting on one input, the outcome being TRUE if the input is FALSE, and vice versa. In a search statement, NOT can indicate the elimination of certain terms which may otherwise cause confusion, for example (cat OR feline) NOT tiger.

On-screen information point: Computer usually based on touch-screen technology, in a strong housing situated in a public place, for example a kiosk in a shop or a railway station; used to find out information, conduct transactions, etc.

Option button: In a dialogue box or on a web page, there may be option buttons offering a choice of 'back' and 'next' or 'yes' and 'no', for example. A small circular button that allows selection of one option in a set of options is known as a radio button.

OR: Logical operator acting on two inputs, the outcome being TRUE if one or other or both of the inputs is TRUE.

Orientation: How text and/or images appear on a page or on a screen. See landscape and portrait.

PDA: short for 'personal digital assistant', a hand-held electronic organiser. This portable pocket-sized device is capable of limited amounts of processing. Data entry can be via a pen-like stylus moving across a screen, and can be used for making notes and/or taking signatures.

PIN: Short for personal identification number, a secret number used like a password known only to the user, to gain access to private information such as a bank account, and to draw money from a cash machine.

Point-and-click device: A hardware device that controls a cursor to point to and click or drag on-screen objects to select and act on them, for example a remote control or joystick.

Portrait: One of two orientations – landscape and portrait – used to describe how material (text and/or images) is printed on a page or appears on a screen. Portrait orientation of images has the shorter edge across the top; with printed matter, the lines of text are parallel to the shorter side of the page.

Print: A command that tells a computer system to produce a paper copy of a document or graphical image.

Glossary

Proofread: To read a document, looking for errors in punctuation, spelling and grammar as well as factual inaccuracies.

Query: In a database, a formalised search for information.

Record: In databases, this unit of data comprises a number of fields to form an identifiable collection of data, such as information about a single customer or a library book.

Relational operator: Mathematical operator which compares one piece of information to another, for example, > (greater than), < (less than). A mathematical symbol used to specify criteria for a search by linking variables and/or values within an expression: = means equal to; < means less than; > means greater than; <= means less than or equal to; >= means greater than or equal to.

Relative cell references: In a spreadsheet, when a formula in one cell is copied to other cells, it is replicated using either relative cell referencing or absolute cell referencing. Relative cell referencing automatically updates each item in the formula relative to the cell into which it is copied. In this way, for example, the formula for the sum of the cells in one column can be copied to produce sums of the cells in other columns. Sometimes, a cell reference in a formula is to remain the same when it is copied, for example the VAT rate, because while that data may be variable, it is stored in a single cell. The dollar sign is used to indicate a cell reference that is not to be changed during replication; for example, \$A\$1 is an absolute reference to cell A1. See also cell reference.

Replication: In a spreadsheet, copying formulae to a different location in the worksheet, or to a different spreadsheet.

Row: See column

RSI: Abbreviation for 'repetitive strain injury', a condition of numbness, pain or general fatigue in the fingers, arms, wrists, neck, back or shoulders. RSI is caused by a combination of factors, such as high stress, a poorly designed work area and repetitive movements such as typing.

Save: To store a file on a disk or other storage medium.

Save as: To save a file to disk at a different location and/or with a different filename. This can also be used to save a file for the first time, when it is being named.

Screen resolution: The number of pixels that can be displayed on a screen expressed as (number of horizontal pixels) x (number of vertical pixels), for example 1024 x 768. The ratio of horizontal to vertical resolution is usually 4:3, the same as that of conventional television sets.

Search: A facility that allows the user to find matches within the data, for example in a document or on the web, to given criteria. Criteria can be simple or complex, single or multiple, involving one or more logical expressions.

Search engine: An internet tool used to find web pages containing information on specified topics. The search may cover titles of documents, URLs, headers or the full text. The search engine, for example Yahoo or Google, accesses a database system that catalogues internet addresses.

Search within results: A refined search in the group of web pages returned by an initial search.

Shutdown: The process of closing down a computer during which program settings and files are saved.

Software: Programs that run on a computer system; often installed separately, for example from a CD. See application software.

Sort: A facility that allows the user to arrange data items in a pre-determined order, for example alphabetical or numerical, ascending (going up) or descending (going down).

Sources: Identified as being ICT-based or non-ICT-based sources of information.

Spam: Unsolicited emails.

Spellchecker: A software tool used to query unfamiliar spellings and detect repeated words, giving the user the opportunity to correct or delete them.

Split cells: In a table, to break a single cell into two or more separate cells.

Glossary

Spreadsheet: A software application that helps the user to manage, analyse and present numerical and string (i.e. textual) information. It is often used to present information as graphs and charts. A spreadsheet may comprise one or more worksheets in which numerical and string data are stored in rows and columns of cells. A worksheet is often called a spreadsheet.

Style: In text formatting, for example bold, italic and underlined. In paragraph formatting, applying styles to paragraphs gives consistency of layout throughout a document, for example line spacing, alignment, font.

SUM: A spreadsheet function that returns the total of the values in the specified cell range.

System settings: Persistent settings that configure a system to suit the user(s), for example date and time on the system clock, words added to a spellcheck dictionary.

Tab: A series of points that are marked across the page, providing a method of formatting a document so that the cursor moves to specified distances along the width of the page. Also the name of the key used to move the cursor to the next indicated tab stop. It is possible to indent and line up text using the tabs. A word processing program will automatically set the tabs across the page (the default setting) but the user can reset the tabs to the distances required.

Table: A rectangular array of cells. A table is used to display data in rows and columns to make it easier to understand information. Tables may be created using, for example, word processing, desktop publishing, spreadsheet and database programs.

Text box: A rectangular area into which text can be typed.

Text message: Sometimes known as SMS (short message service), available on digital GSM (Global System for Mobile) networks, allowing text messages to be sent and received via the network operator's message centre to a phone, or from the internet, using a SMS gateway website. If the phone is powered off or out of range, messages are stored in the network and are delivered at the next opportunity.

Text wrap: Allowing text to flow around, for example, a graphic image.

Toolbar: An area of the screen, often at the top of a document, a row, column, or block of onscreen buttons or icons that, when clicked, activate certain functions in an application. For example, buttons for setting the font style of selected text to italic, bold, or underline.

Touch-sensitive screen: A visual display unit that combines output on the screen with an input option. The user makes choices by touching icons or graphical buttons on the screen; the act of touching is sensed by special receptors on the screen surface. See onscreen information point.

Undo: An option to reverse an action, such as the keying of text or inserting/deleting an image. Undo applied to typing has the effect of erasing characters previously typed.

Unique record identifier/primary key: The key field, selected as being most important for identifying a body of information (an entity, object or record). The column or columns (fields) of a database table whose individual or combined values uniquely identify a row (record) in the table.

User id (identification): A name or codename used during a log-in process to identify the user. The user id may then appear on screen as a salutation to the user.

Virus: A program designed to corrupt data stored on a computer, often transmitted via email attachments.

Virus protection: Using anti-virus software to detect and remove computer viruses. The simplest virus protection software scans executable files and boot blocks for a list of known viruses. Others are constantly active, attempting to detect the actions of general classes of viruses and checking emails for viruses in attached files.

Web address: The name which identifies a web page, the URL of the home page within a website on the internet, for example www.bbc.co.uk

Web browser: The software which allows the user to see web pages.

Website: A collection of linked web pages that can be accessed using a browser.

Glossary

Web page: A unit of information from a website that can be addressed using its URL.

Wildcard: A symbol used in some commands or search instructions to replace a range of characters.

* stands for any number of characters, ? stands for any single character. For example, searching for Jan* in a personal database would show Jane, Janet, and so on.

Window: A section of a computer screen through which the user views the display for a particular application.

At any one time, only one window is active: the one the user is interacting with.

Word processor: A software application that allows the user to produce documents including letters, reports, manuals and newsletters. Word processing includes text editing, text formatting and producing printed output.

Worksheet: A part of a spreadsheet, similar to large sheets of paper, used for 'number crunching', for example for accounting and budgeting purposes.

A spreadsheet may have only one worksheet, or a number of worksheets.