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| **SUBJECT:** | **ICT & Computer Science** | **YEAR GROUP:** | **8** |

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| **Term** | **Topic** | **Content Outline** | **Learning Outcomes** |
| Term 1 | Website Design for a Purpose (4294) | Learners should be able to organise text into a series of two or three webpages. Learners know how to save their pages so that they can be viewed as HTML.  Learners provide working links to and from all of their webpages. Learners also include links to other websites. The links should be easily identifiable and placed sensibly within the pages, but there is no expectation for a navigation menu at this level.  Learners are able to insert images into their webpages. They should be of an appropriate size and quality, and learners should be able to demonstrate that they are in control of where the images are placed.  Learners test their site (the two or three pages from LO1–3) and make refinements to the navigation options to make them more user friendly or more appealing to the target audience. They demonstrate some idea of consistent navigation (e.g. a very simple navigation menu), and of consistency in content presentation between the pages. They change font or page formatting to make it more suited to their audience, considering that not all fonts are available through all browsers so this may affect the way the viewer sees the webpage.  Learners are able to identify some basic HTML tags in the source code for a webpage OR they are able to create a very simple webpage using HTML code. | 1. Create a series of connected web pages 2. Include links 3. Insert images 4. Demonstrate user awareness 5. Recognise HTML code |
| Documents for a Purpose (4289) | Learners can apply a range of formatting options, such as bold, italic and underline, as well as being able to amend font type and colour, to highlight key points or titles within the text and make the document suitable for its purpose. Learners should also demonstrate an ability to change the look of text/passages within a document, to make it more appropriate for its meaning.  Learners can use text wrap, image/object size, cropping or positioning options, so that images or other objects are placed appropriately in the document. Learners should make appropriate judgements when resizing images, bearing in mind that an image will deteriorate when aspect ratio changes. Learners should demonstrate an ability to be in control of how objects look and are how they are placed within the text.  Learners insert a table within the document.  Learners use bullet points, numbering, lists or tabs to add extra definition to their document.  Learners are able to change page layout (portrait to landscape or adjust margins) and add page numbers or other items to the header or footer of the document.  Learners are able to justify (at least verbally, if not in writing) the choices they have made when formatting their document to make it appealing to its target audience. | 1. Create and format text which is suitable for a particular purpose 2. Adjust properties to allow graphics, or other objects, to fit well within the document 3. Insert a table into a document 4. Use advanced formatting features 5. Use page- formatting options 6. Adjust page formatting for a specific audience |
| Term 2 | Multimedia for a Purpose (4290)  **Presentation Slides** | The order in which the slides will be viewed should be clear from the printout.  Learners select materials which are relevant, and which demonstrate some awareness of the needs of the target audience.  Learners should include information on effects they used as annotations of the relevant slide.  This is best presented as a ‘script’ for each slide, clearly identifying when each effect begins, what it is and how long it lasts.  The overall effect of the presentation matches its stated purpose and intended audience. Learners provide a short-written description, explaining how their choice of material, effects and structure are appropriate to the audience and purpose of the presentation.  Types of information: Text, numbers, images, graphics, sound,  video Images, video or sound for presentations: Clip-art, photo,  scanned images, borders, create diagrams or graphics, image formats. Pre-recorded audio/video clips; audio and video formats  **Charts and tables for presentations:** Table, pie chart, graph diagram, organisational chart, flowchart  **Combine information for presentations:** Combine images,  charts, tables with text by inserting, re-sizing and positioning; use of text boxes, presentation with audio and/or video, import information produced using other software; reference external information with hyperlinks  **Constraints:** On content: copyright law (eg on music downloads or use of other people’s images), acknowledgment of sources, avoiding plagiarism; equal opportunities; local guidelines; On delivery (eg environment, timing)  **Store and retrieve:** Save, save as, find, open, close; naming  protocols; reducing file size, save presentation as a stand alone show or as web pages  **Slide structure:** Layout; use existing templates, designs and styles, organisational guidelines; adapt and create new templates  **Presentation effects:** Video, sound, animation, slide transitions, visual and sound effects, hyperlinks  **Edit slides:** Size, crop and position objects; wrap text, add captions and graphic elements, slide order; change orientation  **Animation and transition effects:** Adding and removing hyperlinks; apply and create transitions, apply animations | 1. Create a plan for a presentation 2. Recognise and select appropriate source materials 3. Incorporate transition and animation 4. Incorporate timings, audio and ‘build’ effects 5. Demonstrate a clear sense of audience and purpose 6. Identify what types of information are 7. required for the presentation 8. Enter text and other information using layouts appropriate to type of information Insert charts and tables into presentation 9. slides Insert images, video or sound to enhance the presentation Identify any constraints which may affect the presentation 10. Organise and combine information of different forms or from different sources for presentations 11. Store and retrieve presentation files effectively, in line with local guidelines and conventions where available 12. Identify what slide structure and themes to use 13. Select, change and use appropriate templates for slides 14. Select and use appropriate techniques to format slides and presentations Identify what presentation effects to use to enhance the presentation 15. Select and use appropriate techniques to edit slides and presentations to meet needs |
| Video or Animation for a Purpose (4296) | Learners must plan their video or animation on paper initially, and must limit their work to within the capability of the technology available to them.  **Video**: this will involve filming, showing an awareness of the effect of focusing, zooming and the speed at which the camera is moved (to compensate for blurred images). Recorded footage should then be downloaded onto the computer.  **Animation**: learners can create or adapt an appropriate picture, considering size, shape and colour. The picture should be saved, either on a disk or the hard drive, for later retrieval.  **Video**: learners need to be able to make informed decisions to remove certain pieces of footage, and to order the clips according to their plan.  **Animation**: learners should be able to use appropriate software to amend and alter the picture for different frames of the animation. The animation should include at least five frames. The software can be  used to produce middle movements (e.g. tweening), but the learners must have manually created at least three of the frames themselves by editing their original picture.  **Video**: learners should be confident enough with the software to add a piece of appropriate music, or recorded narration, over their film.  **Animation**: if no additional software is available, music or narration could be demonstrated in a presentation to the class (including audio on a CD or other electronic storage peripheral), with the teacher providing the evidence for assessment. | 1. Create a plan for video or animation 2. Create source material for video or animation 3. Produce video or animation with appropriate software 4. Add soundtrack or narration to video or animation 5. Demonstrate awareness of how the finished media text addresses a specific audience |
| Terrm 3 | Exploring Databases (4281) | Learners can enter numeric and text data into a database with a predetermined structure, making no more than three errors in entering five additional records.  Learners can identify at least two different field types in the database.  In order for this to be feasible, in a database of 20 records, the result of such a search should be no more than three records for a question of the type ‘Which characters have height greater than x metres?’.  Learners answer a real-life question from their databases by turning their questions into suitable database search criteria.  Learners should give a written description of the results of sorting and searching data in response to a question. The answer is likely to be one or two sentences, plus a short list giving relevant values, if appropriate. | 1. Add new records to a data file 2. Identify field types 3. Use ‘equals’, ‘more than’ and ‘less than’ in searches 4. Rephrase a given question in terms of search criteria 5. Interpret data |
| Databases for a Purpose (4292)  Database Software | The learner identifies the overall purpose of the database, and how it will be used.  The learner creates a simple database, identifying an appropriate (not necessarily exhaustive) list of fieldnames. The learner produces a simple data-entry form to collect their data, so that a small number of records can be added to their database.  The learner should be aware that different types of data may benefit from being handled differently. They can show this either in data-entry forms or in how they set up the field types in their database. E.g. learners choose an appropriate format (text, number, yes/no or drop-down list) for each field.  The learner needs to demonstrate to you that the database works as expected. The learner should be able to describe to the teacher two or three tests to be run, and the teacher should verify whether the tests provided the correct information in each case.  The learner shows a basic understanding of how different users might need to see different information from within their database. They should also understand fundamentals of data security, e.g. that only authorised people should be able to change data, and that passwords might be needed to allow different levels of access (e.g. for viewing or editing).  The learner uses data imported from/exported to other associated software packages, e.g. spreadsheet/ word-processing packages.  **Database design:** What types of information are stored, use ofdata entry form, routine queries, how data is structured in a single table non-relational database; use of indexes and key field to organise data  **Data integrity:** Unique not null primary key; field characteristics;data validation; consistency, completeness, accuracy; Effect of malicious or accidental alteration;  **Modify database table**: Add/amend/delete field; field characteristics  **Field characteristics:** Data type, field name, field size, format, validation; primary key  **Problems with database tables:** Redundant data, duplication, table structure, field characteristics and validation; sources of Help.Enter, edit and organize data: Select and update fields, create new records, locate and amend records; using wildcards, search operators; error checking; data validation  **Format data entry forms:** Field characteristics and layout, tables, colour, lookups  **Check data entry:** Spell check, format, accuracy, consistency, completeness, validity, security  **Data entry errors:** Due to field size, data type, validation checks; using help; deal with data that does not fit parameters, alerts, reminders; problems with forms  **Database queries:** Alphanumeric sort, filter, single criteria, multiple criteria; save queries and output  **Database reports:** Using menus, wizards or shortcuts; selected fields; selected records  **Formatting database reports:** Data fields; page and section layout; add text or images; adjust page setup for printing | 1. Identify a purpose for a database 2. Design, create and develop a database for a specific purpose 3. Utilise different field types 4. Test database 5. Demonstrate an awareness of data security 6. Transfer data between applications 7. Identify the components of a database design 8. Describe the field characteristics for the data required 9. Create and modify database tables using a range of field types 10. Describe ways to maintain data integrity 11. Respond appropriately to problems with database tables 12. Use database tools and techniques to ensure data integrity is maintained 13. Create forms to enter, edit and organise data in a database 14. Select and use appropriate tools and techniques to format data entry forms 15. Check data entry meets needs, using IT tools and making corrections as necessary 16. Respond appropriately to data entry errors 17. Create and run database queries using multiple criteria to display or amend selected data 18. Plan and produce database reports from a single table non-relational database 19. Select and use appropriate tools and techniques to format database reports 20. Check reports meet needs, using IT tools and making corrections as necessary |