

ICT & COMPUTING

Year 8 Schemes of Work

Term 4

Module 4 – Database Management System

| About this Module | Learning Outcomes/Success Criteria (WILF) : |
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| <p>This unit focuses on designing and building databases. The primary focus of this module is to familiarise students how to set up the database, import data into a database and use mathematical operators to search for data in a database. Students will learn to create forms and queries based on different criterion.</p> | <p>All students will be able to understand what a database is and set up a database; be able to discuss the advantages and disadvantages of paper and computerised databases; be able to know what data types are; be able to perform basic operations like store and search and sort data</p> <p>Most students will be able to choose the correct data types for specific data items; be able to use logical and mathematical operators to search for data in a database; be able to create forms and add amend and delete database records using a form; create navigation buttons in forms; create basic queries</p> <p>Some students will be able to perform complex database searches; be able to modify and re-design a database forms, create complex queries based on different criterion</p> |
| Where the unit fits in: | Cross- curricular Links: |
| <p>Data and Data representation Recognise the different types of data, and understand that data can be structured in tables to make it useful. Appreciate that programs can work with different types of data. Perform more complex search to analyse and retrieve data</p> <p>Information Technology Use software to collect, analyse and evaluate data.</p> | <p>Literacy : <i>Learn a range of vocabulary</i></p> <p>Maths: <i>Usage of mathematical operators as comparison operators</i></p> <p>SMSC: <i>Spiritual – Limitations of technology – Advantages and disadvantages of databases</i> <i>Moral – Listening to others and working as a class. Use of data and the moral issues surrounding it</i> <i>Social – Risks of data security and ways to prevent those</i> <i>Cultural – To be aware of the information age we live in. take into consideration the audience and purpose when creating databases.</i></p> |

| Mod ule | Date | Topic | Teaching Activities | Learning Objectives | Resources |
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|---------------|-------------|---|--|--|---|
| | 01/03/2016 | Queries – Searching, Sorting and Filtering Records | <p>Introduce the term query and explain how queries can be used to search information from a database based on a particular criteria.</p> <p>Make students aware of the fact that data can be searched based on a single criteria or a number of criterion.</p> <p>Explain the importance of sorting and filtering records in a database</p> <p>Demonstrate how to use ascending sorts and descending sorts for both text and numerical fields</p> <p>Make students understand that filtering is a quick way to find records in a table that match a certain selection criteria.</p> | <p>Students will be able to...</p> <p>Sort and filter records based on certain selection criteria</p> <p>Understand that computer databases are much quicker to search than paper databases.</p> <p>Use queries to extract information based on a certain criteria</p> <p>Know how to perform simple database searches</p> | <p>http://www.ictlounge.com/html/year_8/databases_main.htm</p> <p>http://www.teach-ict.net/software/access_2007/access_2007.htm</p> <p>PowerPoint presentation</p> <p>Student handout</p> |
| | 04/03/2016 | Database Forms | <p>Explain the need to create database forms and demonstrate how to create forms.</p> <p>Show the students how to change layout, colours and add images etc., to the forms.</p> <p>Tutor led session on how to insert pictures and logos in forms</p> <p>Demonstrate how to use a form to navigate through the database and add and delete new records using navigate buttons.</p> <p>Tutor led session on how to include hyperlinks and pictures in forms</p> | <p>Students will be able to ...</p> <p>Understand what a database form is</p> <p>Create a database form</p> <p>Know how to add, update and delete database records using a form</p> <p>Use their creativity to re-design a form</p> <p>Create navigate buttons to add , delete and update records</p> | <p>http://www.teach-ict.net/software/access_2007/access_2007.htm</p> <p>PowerPoint presentation</p> <p><u>Homework</u> Complete homework sheet on comparison operators and listing advantages of computer based databases</p> |

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| | 08/03/2016 | Wildcards and Multiple criteria | <p>Introduce the term wildcards. Explain the usage of wildcard symbols</p> <p>Describe simple and complex queries and their usage.</p> <p>Explain the need to use a wide range of mathematical and logical operators in order to perform an effective search</p> | <p>Students will be able to...</p> <p>Use wildcard symbols to select records containing values which are similar but not exactly same</p> <p>Use logical and mathematical operators to perform complex database searches.</p> | <p>http://www.ictlounge.com/html/year_8/databases_main.htm</p> <p>http://www.teach-ict.net/software/access_2007/access_2007.htm</p> |
| | 11/03/2016 | Database Reports | <p>Introduce the term reports and how reports are used to display the contents of a database.</p> <p>Tutor led session on creating reports using the reports wizard</p> <p>Demonstrate how reports can be made out of different sets of data</p> <p>Explain reports can be modified to change how it looks</p> | <p>Students will be able to...</p> <p>Understand the purpose of a database report</p> <p>Know how to create a database report based on certain criteria</p> <p>Modify the design of a database report</p> | <p>http://www.ictlounge.com/html/year_8/databases_main.htm</p> <p>http://www.teach-ict.net/software/access_2007/access_2007.htm</p> <p>http://www.ictlounge.com/work/key_stage_3/unit8.2_databases/part6-reports/tasks/task1-how_to_create_reports_in_access.pdf</p> <p>Homework</p> <p>Complete homework sheet on a college course database</p> |

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| | 15/03/2016 | Relational Database | <p>Introduce the term relational database.</p> <p>Explain why data in a database can be stored in more than one table and how to link these tables together</p> <p>Tutor led session on usage of primary key and foreign key</p> | <p>Students will be able to...</p> <p>Use the technique of linking simple tables together and understand the real power of relational databases</p> <p>Use primary and foreign keys effectively in a database</p> | <p>Ms-Access tutorial</p> <p>Student handouts</p> |
| | 18/03/2016 | Formal Assessment | <p>Perform a formal practical and theoretical assessment on Database management system</p> | <p>Students will be able to ...</p> <ul style="list-style-type: none"> Exhibit their knowledge on databases. | <p>Assessment papers</p> |
| | 22/03/2016 | Feedback Time | <p>Assessment Feedback</p> | <p>To respond to feedback on assessment</p> | <p><u>Homework</u></p> <p>Complete homework sheet on queries</p> |

Throughout the term pupils will work on a School Library Database.