

Digital Data Handler



	Exploratory Learner will	Developing Learner will	Confident Learner will	Independent Learner will	Transformational Learner will
Awareness	<p>View simple graphs and charts which present data and information in a graphical form.</p> <p>Identify differences between types of graphs and charts.</p> <p>Understand that structured data is information.</p>	<p>View a range of graphs, charts and spread sheets and understand the differences between the ways in which the data can be presented.</p> <p>Identify where data is presented in graphical form in the wider world.</p> <p>Understand that data is structured information and that it can be collected in a number of ways.</p>	<p>Begin to extract meaning from a range of increasingly complex charts, graphs and spread sheets.</p> <p>Identify graphs and charts which are used in a variety of ways to convey information.</p> <p>Identify opportunities within wider curriculum to apply data handling skills and techniques.</p> <p>Understand that a data field in a spread sheet or database may be one of a number of different types of information: text, integer, decimal, date, etc; and that these data items may be handled, stored and sorted.</p>	<p>View large online databases such as Census or Public Records Office data and identify the range and quality of the data held within them.</p> <p>Evaluate the quality and trustworthiness of data sources from both online and offline sources.</p>	<p>Be aware of how databases can be the infrastructure behind websites, e.g. data in large e-commerce sites or social networking sites is typically held in databases.</p> <p>Have an awareness of data analysis languages such as Server Query Language (SQL), and how they apply to database queries and data analysis.</p>
Planning	<p>Contribute to discussions regarding the type of information that could be collected and presented.</p> <p>Discuss ways in which the data collected could be presented in a digital format.</p>	<p>Work independently or with other learners to decide on the types of data to be collected and how that data can be presented.</p> <p>Prepare a basic spread sheet which has an increasing number of fields.</p>	<p>Design own methods for collecting a range of data eg using an online survey, using sensors, interviews etc.</p> <p>Prepare an increasingly more complex set of data fields which could be presented in a database format.</p> <p>Begin to consider the relevance of collecting certain data and the importance of eliminating erroneous data.</p>	<p>Plan and create fields of enquiry for data collection for a range of required projects.</p> <p>Business project using spread sheets to create budgets / profit and loss accounts / balance sheets.</p> <p>Begin to understand the principles of database design to ensure efficient data structures.</p>	<p>Choose appropriate data analysis tools, using spread sheets and databases in their correct contexts.</p> <p>Understand the relational database model, and to be able to apply these principles when designing database structures.</p> <p>Develop normalised database structures that reduce or eliminate duplicate and redundant data.</p>
Skills	<p>Explore simple counting and data handling programs.</p>	<p>Begin to collect data in a number of ways eg verbally,</p>	<p>Regularly use a range of methods and technologies to</p>	<p>Search large online databases for specific records and develop</p>	<p>Know the specific range of features that software and data</p>

	Contribute to a simple class chart or table.	<p>using sensing equipment.</p> <p>Use a simple graphing application to present previously collected data.</p> <p>Add headings and titles to the graph and fields.</p> <p>Begin to sort the data in a simple spread sheet in order that conclusions can start to be drawn.</p>	<p>collect required data eg data loggers, sensors, verbal methods, surveys etc.</p> <p>Begin to use formulae and algorithms to manipulate data within spread sheets.</p> <p>Understand the structure of simple databases and their uses.</p> <p>Know the key terms within the structure of databases, such as field, record, file, etc.</p> <p>Edit or extend a database or spread sheet to gain specific information or draw conclusions.</p>	<p>advanced searching techniques to narrow and widen searches.</p> <p>Combine charts, tables, graphs and spread sheets with other applications.</p> <p>Begin to use more sophisticated spread sheet analysis tools such as pivot tables and slicers to cross-tabulate data and drill down into large sets of data.</p> <p>Understand the use of a range of common formulae and symbols, relative and absolute cell references.</p> <p>Create simple queries that filter information from a single database table.</p>	<p>handling applications allow including:</p> <ul style="list-style-type: none"> • Data entry and sorting • Organisation and selection of records • Generation of reports following data interrogation • Creation of graphs and charts. <p>Implement simple systems that allow users to perform CRUD (Create, Read, Update and Delete) transactions.</p> <p>Create multiple-table database queries that merge and join data sources.</p>
Sharing	Contribute information to a group graph or chart which displays information.	Share the graph and the associated spread sheet or data table with a wider audience.	Present the database or spread sheet to others in order for the data to be interrogated eg online.	Work with others to model situations, including developing “What if” questions and explain the benefit of data modelling.	Identify ways in which data held in an application can be exported, presented and shared with others (e.g. Financial Projections, InfoPath Forms, Census Returns).
Feedback / Evaluation	<p>Explain the information which is held in a graph or chart and describe the differences between the range of information displayed.</p> <p>Identify ways in which graphs could be improved.</p>	<p>Request feedback, from others, on the value of the graph or chart and also the effectiveness of the presentation.</p> <p>Use any feedback to refine the graph or chart.</p>	Evaluate, interrogate and deconstruct a database or spread sheet in order to identify strengths and weaknesses.	Evaluate data, suggest modifications and prepare simple queries and reports which can be run from within a database.	Explain how linking data can reduce the duplication of data, making it simpler to keep information up to date and increasing the accuracy/consistency of data.

© Wolverhampton City Council 2013. This LTT eLearner Framework is copyright protected. All rights in the design, text, graphics and other material included in the LTT eLearner Framework and the selection or arrangement thereof is copyright of Wolverhampton City Council or other third parties. Permission is granted to electronically download, copy and print, in hard copy, portions of the LTT eLearner Framework solely for private or educational use (within the classroom), provided that no changes are made to the material and that Wolverhampton City Council is acknowledged as the owner.

Any other use of the materials (including reproduction for purposes other than noted above and alteration, modification, distribution or republication) without our prior written permission is strictly prohibited. Should you require permission for the above, please contact [Corporate Communications Team], Wolverhampton City Council, St Peter’s Square, Civic Centre, Wolverhampton, WV1 1RJ. Permission to reproduce copyright material does not extend to any material identified as being the copyright of a third party. Permission to reproduce such material must be obtained from the copyright holder.