



Number of weeks (between 6&8)	Content of the unit	Assumed prior learning (tested at the beginning of the unit)
7 weeks	<ul style="list-style-type: none">• A flat-file or two-table relational database of their own, using suitable field types and adding in appropriate validations	No previous learning is necessary with this unit. Many pupils may have a basic understanding of databases from previous years.



	<ul style="list-style-type: none"> An input form with help text, combo boxes and list boxes Queries and a report using data from one or both tables <p>a front end menu for their application linking to the database input form and report</p>																																																																																																																																																																																																																									
Assessment points and tasks	Written feedback points	Learning Outcomes (tested at the end and related to subject competences)																																																																																																																																																																																																																								
<p>Classwork tasks will be looked at to show whether they have completed tasks.</p> <p>Test will completed towards the end of the unit.</p> <p>This Scheme of Work is aimed towards GCSE Grade E-C.</p>	<p>Feedback on the work will be provided and marked worked will be provided.</p>	<table border="1"> <thead> <tr> <th></th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> </tr> </thead> <tbody> <tr><td>I can create a database table</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can open an existing database and add data</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can sort and filter data</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can add data and additional fields to an existing database table</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can produce a simple database report</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can create a database table, selecting the appropriate data types for my fields</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can import a text file</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can create an input mask</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can create a data entry menu.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can create command buttons and assign macros</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can create a switchboard.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can create relationships between more than one table in my database.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can create a simple database query that is relevant</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can create modifications to a database table that are free from errors</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can create a simple query using one table/criteria</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can add error-free data to a database</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can create complex queries using one or more tables</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can create reports using complex queries</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can create and edit reports using design view</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can explain the key database terms</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can recall examples of two paper-based databases</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can explain what a database is and how it might be used in real world situations</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>I can use pseudo code to write how I would search a database</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> <ul style="list-style-type: none"> Give examples of databases used by organisations which are accessible to the public via the Internet Create a database table using several fields with different data types State the purpose of a primary key in a database Create the relationship between two linked tables Create a basic input form to input data Query the database using more than one criterion & to create a report 		1	2	3	4	5	6	7	8	I can create a database table									I can open an existing database and add data									I can sort and filter data									I can add data and additional fields to an existing database table									I can produce a simple database report									I can create a database table, selecting the appropriate data types for my fields									I can import a text file									I can create an input mask									I can create a data entry menu.									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Lesson	Clear learning intentions	Clear success criteria	Hook	Presentation of content	Guided practice	Independent practice (homework)	Closure
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1	<ul style="list-style-type: none"> Understand what a database is and why it is useful in many different applications Learn what is meant by a flat file database, record, field Enter data into a database in datasheet view Create queries using multiple criteria to answer questions relating to a given flat file database Use different operators such as >=, BETWEEN, AND, OR, NOT and the wildcard * in queries 	<ul style="list-style-type: none"> To know the difference between a flat file database, field record. To be able to enter the data and carry out different searches for different scenarios. To use different operators when searching to minimise and get the exact search result. 	<p>As a starter activity ask students to say what they understand by the term “Database” and give examples of where a database might be useful.</p> <p>Feedback from students.</p> <p>Compare searching for a suspect using a computer to searching through a manual filing cabinet.</p>	<p>Open Gotcha.mdb and display the database window on the board.</p> <p>Ask them to load the database and open the Suspects table. Explain that this is a database of suspects, describing their characteristics such as name, age, height etc. They will shortly be asked to solve a number of crimes using this data.</p> <p>Now hand out Worksheet1 Gotcha database helpsheet. As an initial task, ask the pupils to add two records to the bottom of the Suspects table – one record describing themselves, and another one.</p> <p>As a class exercise, look at each of the sample clues on this sheet and for each one ask pupils to identify names from the records shown on the worksheet.</p> <p>Now show pupils how to create a new query with all the fields shown individually in the query table. Display the sample scenarios (1.1, Data Theft) and demonstrate how to create and run a query. (Show the different operators when carrying out search). Ask the class to solve the next examples and to write down who the person is on the sheet</p>	<p>Make sure the pupils have access to Gotcha.mdb on their own computers.</p> <ul style="list-style-type: none"> Print one copy of the document Gotcha Crime Scenarios.pdf. Cut each sheet in two so that you have 32 different crime sheets. You could laminate these if you intend to reuse them and to prevent pupils writing on them. These will be passed out to students. Worksheet 1 Gotcha Database Helpsheet and Worksheet 2 Gotcha! 	<p>To complete at least scenarios and have the queries to support to your answers.</p>	<p>Go through some of the answers with the class.</p> <p>Test pupils on the keywords learnt in this lesson.</p> <ol style="list-style-type: none"> I. Database II. Field III. Records IV. Flat file V. Query VI. Simple query VII. Complex query VIII. Operators
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2	<ul style="list-style-type: none"> • Design a database with one or two tables • Create the database structure • Use suitable field types including numbers and text • Add validations and validation text to at least one field • Add records to the table and test the validations 	To be able to create a database and to insert at least 10 records.	<p>Remind pupils that data is stored in tables. Define records and fields. Explain what a primary key is using the cars database.</p> <p>Explain that each pupil is to think of an idea for a database. Let pupils suggest ideas and discuss them as a class. Some suggestions might be stock of some sort (anything from pets in a pet shop, plants in a nursery, newspapers in a paper shop), club members, cars for hire etc.</p>	<p>Explain that each pupil is to think of an idea for a database. Let pupils suggest ideas and discuss them as a class. Some suggestions might be stock of some sort etc.</p> <p>Go through the basics of a relational database.</p> <p>The solution is to hold the data in two linked tables – Pupil and School. Show pupils how to link the two tables by opening the Relationships window and dragging school ID from the School table to the Pupil table.</p> <p>A database with at least two linked tables is called a relational database. There are basically three types of relationship: 1:1, 1: M: M: M.</p> <p>Go through data types, validations.</p> <p>Hand-out Worksheet 3 Table Structure and got students to complete this for their database.</p>	<p>Worksheet 3 Table Structure to help them know what to write/create for their actual database.</p> <p>If students have completed this worksheet then they should start creating their actual database using Microsoft Access.</p>	To input 10 records into their database that they have created based on the worksheet they carried out in class.	<p>What you learnt in this lesson?</p> <p>Q & A with class.</p>
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3	<ul style="list-style-type: none"> Note examples of queries on websites Use complex criteria to select records Sort the data on one or more fields Choose which fields to display in the Results table Add a calculated field 	Pupils should create at least two queries in their own databases that might be used frequently to find particular details from their data.	<p>WCRS:</p> <ol style="list-style-type: none"> Have you completed the worksheet from last week's lesson? Have you created the database and inserted suitable data types? Have you completed inserting 10 records? 	<p>Teacher led:</p> <p>Demonstrate a query using the SecondhandCars.mdb database.</p> <p>Point out that you can sort on a particular field.</p> <ul style="list-style-type: none"> If students have not inserted 10 records, students to do this first. Students to then create queries – simple and complex. 	<p>Students to make sure some fields are in alphabetical order.</p> <p>Extension: Students to think of other queries to carry out.</p>	If students have not completed their queries, then to get this done.	Question and answer session with the whole class on queries.
4	<ul style="list-style-type: none"> Discuss examples of forms on websites Create a new form from a table or query Make the form user-friendly by adding help text, combo boxes, etc. Sort and navigate tables using a form Find, enter, modify and delete records using a form 	Pupils should be able to create an input form based on the database they have created and were working on.	<p>What is an input form? Feedback from students.</p> <p>Start the lesson by browsing some websites which use input forms; for example thetrainline.com, or websites where you can book a ticket.</p>	<p>Teacher led:</p> <p>Teacher to show how to create an input form using the SecondhandCars.mdb.</p> <p>Pupils will now create an input form in which they can enter or edit data.</p> <p>An input form can be created either from a table or from a query.</p> <p>Students need to make sure they insert at least 4 buttons and make the form look presentable.</p>	<p>If students were absent, students could use the second handcars database.</p> <p>If students have completed then they could insert 5 new records into the database.</p>	Complete the input form if not already completed.	<p>Selected student to complete to the front of the class and show their input form.</p> <p>Whole class to inform WWW & EBI.</p>
5	<ul style="list-style-type: none"> Create a report based on a query Edit the layout of the report Create a consistent design 	Pupils should be able to use the queries created in lesson 3 and create a report.	<p>What is a report? Where would you see a report?</p> <p>Feedback from individuals.</p>	<p>Teacher led:</p> <p>Teacher to show how to create a report form using the SecondhandCars.mdb.</p> <p>Go through how to edit the report & how to make it look more presentable.</p>	A visual of what makes a good report will be shown on the board. This is so that students who need support will be able to look and get ideas of what makes a good report.	Complete the report if not already completed in class.	<p>Selected student to complete to the front of the class and show their report.</p> <p>Whole class to inform WWW & EBI.</p>



6	TEST	Pupils to answer all questions in the test - database.	Students to put their details in the front of their exam paper. Inform students to answer every question.	Students completing the test paper.	Students completing the test paper.	N/A	N/A
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