



<b>Topic: Flat-file databases</b>	<b>Year: 5</b>	<b>Strand: Data and information</b>
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**Enquiry Questions**

- How is information recorded?
- How do we compare paper and computer-based databases?
- What ways can we outline how grouping and then sorting data allows us to answer questions?
- How would you explain that tools can be used to select specific data?

**Key Vocabulary**

<b>record</b>	All of the data about a particular person or thing.
<b>data</b>	Data can be letters, words, numbers, dates, images, sounds etc
<b>fields</b>	One specific piece of data in a database record e.g, all about a country could have fields such as 'country name' and 'country population'.
<b>database</b>	a collection of organised data that is stored on a computer
<b>grouping</b>	Grouped data is a statistical term used in data analysis. Raw data can be organized by grouping together similar measurements in a table

**Retrieval quiz**

1. What is a database?
2. Why would you need a data base?
3. Give 3 examples of data
4. If you were sorting data for animals, what 3 fields could you use?
5. How could information be sorted?

**Key Learning**

Pupils create a paper version of a record card database. They then physically sort the cards to answer questions

Pupils use a computer-based database to examine how data can be recorded and viewed. Then compare to the paper database.

Pupils investigate how records can be grouped, using both the paper record cards created in lesson 1 and a computer based database from J2E.

Pupils develop their search techniques to answer questions about the data.

Pupils consider what makes a useful chart, and how charts can be used to compare data.

**Key information**

Flat-file database is a collection of data organised in a single table. The term 'database' means 'a collection of organised data that is stored on a computer'. Databases allow people to search and sort large quantities of data to find information. Data can be letters, words, numbers, dates, images, sounds etc. Databases demonstrate the concept of 'grouping' and 'sorting' data records based on different fields. For example, grouping objects by colour, or sorting into alphabetical order.

A database is composed of 'records', which are sets of data on a particular object. Records are formed from one or more 'fields' of data. A field is one specific piece of data in a database record. For example, a record all about a country could have fields such as 'country name' and 'country population'. The value within the record is the 'answer' to each field, eg Mexico is the value in the 'country name' field and '126.2 million' is the value in the 'country population' field.

Objects have attributes. An attribute includes its 'name' and a 'value'. For example, a ball will have a 'colour', which might be 'red'. 'Colour' is the attribute 'name', 'red' is the attribute 'value'. In a flat-file database the attribute names become the fields when the data about the object is stored as a record. The values of the attributes become the values that are saved in the database fields.