

Grade 4 Computing Assessment: Introduction to Databases

Learning objective: To understand how databases are organized, how to search for information efficiently, and how to identify records and fields.

Read each question carefully. Use the word bank to help you with technical terms. Write your answers clearly in the spaces provided.

Kit the fox is helping the local library organize their collection of nature books. He has created a digital database to store all the information. Each book has its own row in the database, containing details like the title, author, publication year, and genre. Kit uses his computing skills to search for specific books quickly and to organize the list alphabetically.

Word bank: Database · Record · Field · Query · Sort · Filter · Information

1. 1. Define what a 'database' is in your own words. (2 marks)

2. 2. In Kit's library database, what is the difference between a 'field' and a 'record'? Give an example of each. (4 marks)

3. 3. If Kit wants to find all books published before 2010, is he using a 'filter' or a 'sort'? Explain why. (3 marks)

4. 4. Why is it more efficient to use a database to store information about 500 books rather than using a handwritten list? (4 marks)

5. 5. Imagine you are building a database for a sports club. List three 'fields' you would need to include for each member. (3 marks)

6. 6. Extended Writing Task: Explain the process of creating a query. Why is it important for a database to be organized correctly before you perform a query? (Total: 9 marks) (9 marks)

Draw: Draw a simple table representing a database. Include headers for 'Name', 'Age', and 'Favorite Subject', and fill in two example rows of data.

Name	Age	Favorite Subject

Extension challenge: Total: 25/25. Extension: Think of a real-life situation where a database is used (e.g., a supermarket or a doctor's surgery). Write down one problem that might happen if the data in that database was entered incorrectly.