

Data Handling: Computing Assessment

Learning objective: To evaluate understanding of data collection, organisation, and representation through databases and spreadsheets.

Read each question carefully. Use the word bank to support your answers where appropriate. Show your working for any calculations.

Kit the fox is helping the BookFlik group organise their library. They have a list of books including: 'The History of Clouds' (£8.50), 'Ocean Journeys' (£12.99), and 'Forest Maths' (£7.50). Kit wants to store this information digitally so the group can search for books by price or title.

Word bank: Database · Record · Field · Spreadsheet · Cell · Formula · Query · Chart · Sort · Filter

1. Kit decides to use a database. Define the difference between a 'record' and a 'field' in this context. (2 marks)

2. If Kit wants to find all books that cost less than £10.00, which digital tool should he use: a 'Sort' or a 'Filter'? Explain your reasoning. (2 marks)

3. Max is using a spreadsheet to calculate the total cost of three copies of 'Forest Maths'. The price is £7.50. Write the formula he should type into a cell to calculate this. (2 marks)

4. Explain why a spreadsheet is more effective than a handwritten list when managing large amounts of changing numerical data. (3 marks)

5. Compare and contrast a database and a spreadsheet. In what scenario would you choose to use a database over a spreadsheet? (4 marks)

6. Nova wants to create a graph to show the number of star sightings over a week. Justify why a 'Bar Chart' is more suitable than a 'Pie Chart' for this specific set of data. (3 marks)

7. Kit has a dataset of 500 books. Describe a step-by-step process to organise these books alphabetically by author name, and explain why data integrity is important during this process. (5 marks)

Draw: Draw a layout of a simple spreadsheet table that Kit might use to track the library books, including column headers for Title, Category, and Price.

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Extension challenge: Imagine the library grows to 5,000 books. What might happen if the data is entered incorrectly or lacks validation rules? Propose a system to ensure the data remains accurate as the collection expands. Total: /25