

Data Detectives: Year 4 Computing Assessment

Learning objective: To demonstrate the ability to collect, organise, present, and analyse data using digital and physical tools.

Read each question carefully. Use the word bank provided where necessary. Show all your working for maths-based data questions.

Kit the fox is building a database of the fruits available in the forest to help the animals plan their winter feast. He has collected information about the quantity of apples, pears, and blackberries found by the group. He needs to sort this information so it is easy to read and share with the others.

Word bank: Database · Tally chart · Bar chart · Categorical data · Discrete data · Record · Field · Software

1. Kit needs to record the number of apples he found. If he creates a digital database, what is the specific term for one piece of information, such as the number of apples in a single location? (1 mark)

2. Kit collected the following data: 12 apples, 8 pears, and 15 blackberries. Create a tally chart to represent this data. (3 marks)

3. Explain why a bar chart is a more effective way to present this fruit data to the other animals compared to a simple list of numbers. Use the term 'compare' in your answer. (3 marks)

4. Kit wants to add a new category to his database: the price of each fruit in the local village market. If an apple costs 20p, a pear costs 35p, and a box of blackberries costs £1.20, calculate the total cost for 2 apples, 1 pear, and 1 box of blackberries. (3 marks)

5. What is the difference between 'discrete data' and 'continuous data'? Provide one example of each that Kit might encounter in the forest. (4 marks)

6. Kit discovers a mistake in his database entry for pears. Instead of 8, he actually found 18. Describe the steps he should take to ensure the accuracy of his digital database. (3 marks)

7. Extended Writing: Imagine you are designing a digital survey to find out the favourite healthy snacks of your classmates. Justify why you would choose specific types of questions (e.g., multiple choice or open-ended) to ensure the data is easy to analyse. How would you handle any 'outlier' data that does not fit your categories? (8 marks)

Draw: Draw a sketch of a bar chart that displays Kit's fruit data (Apples: 12, Pears: 8, Blackberries: 15). Remember to label your axes accurately.



Extension challenge: Evaluate what might happen if Kit's database lacked 'fields' or categories. How would this affect the searchability of his information? Total: /25