

Kit's Computing Challenge: Visualising Data

Learning objective: To represent and interpret data sets using appropriate visual formats, including bar charts and tally tables.

Kit the fox is organising his library of digital files! He has gathered data on how many books his friends borrowed this week. Follow the drawing steps below to help Kit create a clear data display.

Draw: Draw a clean, professional-looking bar chart titled 'Library Borrowing Records'. Use a ruler to ensure your bars are of equal width and evenly spaced. Use different colours for each bar to represent Pip, Nova, Max, and Ellie. Add a clear key in the corner of your drawing. The style should be tidy and mathematical, similar to a graph found in a computing textbook.



Label words: X-axis · Y-axis · Interval · Frequency · Bar chart · Data point · Scale · Categories

Steps:

1. Step 1: Draw a large L-shaped frame for your bar chart. Label the vertical side 'Number of Books' and the horizontal side 'Friends'. Explain why it is important to include a consistent scale on the Y-axis.
2. Step 2: Draw four bars representing the data provided by Kit. Justify your decision on which interval (e.g., jumps of 2 or 5) you chose for your scale.
3. Step 3: Label the 'Frequency' of each bar at the very top of each column. Compare and contrast the

borrowing habits of Max and Nova based on your finished drawing.

4. Step 4: Imagine a fifth friend, Zara, borrows 15 books. What might happen to the layout of your chart if you had to include her data? How would you adjust your scale?

5. Step 5: Define 'Data Handling' in your own words. Why do computing professionals use charts rather than just lists of numbers?

6. Step 6: If Kit accidentally recorded Max's borrowing as 120 instead of 12, explain how this 'outlier' would affect the accuracy of the overall chart.