

Kit's Data Detective Log: Investigating Patterns

Learning objective: To collect, organise, and interpret data using tally charts and pictograms to answer scientific or logical questions.

Help Kit the fox solve a local mystery by gathering data! First, choose a question to investigate (e.g., 'What is the most popular fruit in class?'). Collect your data using a tally chart, then transfer your findings into a pictogram or bar chart. Finally, use your data to draw a logical conclusion.

Word bank: tally chart · data · frequency · pictogram · axis · conclusion · variable · pattern · interpret

1. Research Question: State clearly what you are investigating and explain why this data is useful to collect. (2 marks)

2. Data Collection: Create a tally chart here. Use at least four categories and record your findings accurately. (3 marks)

3. Data Visualisation: Describe how you would label the axes if you were to turn your tally chart into a bar chart. Why is it important to keep the scale consistent? (3 marks)

4. Analysis: Identify the 'mode' (the most frequent value) from your data. Explain why this result might have occurred. (2 marks)

5. Comparison: Compare and contrast your findings with a partner's data. Are there any anomalies in your results? Justify your answer. (4 marks)

6. Conclusion: Based on your evidence, what is the most significant pattern you observed? What might happen if you repeated this survey with a larger group of people? (4 marks)

Extension challenge: Design a 'Data Prediction Challenge'. Imagine you are going to survey 100 people instead of your class. Write a paragraph explaining which category you expect to be the most popular and provide a logical reason for your prediction based on your current findings.