

Max's Probability Experiment Record

Learning objective: To understand and use the language of probability to describe the likelihood of events occurring, and to record findings from simple probability experiments.

Max the monkey is helping us investigate chance! Follow these steps to record your probability experiment. First, pick an event, such as rolling a dice or picking a coloured marble from a bag. Before you start, write down your prediction. Then, conduct your experiment 20 times, recording your results in the tally chart section. Finally, use your maths skills to describe your results using the correct vocabulary.

Word bank: certain · likely · unlikely · impossible · even chance · probability · outcome · tally · prediction

1. The Experiment: Describe the object you are using (e.g., a six-sided dice) and what specific outcome you are looking for. Explain why you chose this experiment. (2 marks)

2. Prediction: Before you begin, what do you think will happen? Use the words 'likely', 'unlikely', or 'even chance' to explain your reasoning. (2 marks)

3. Tally Chart: Create a table below with two columns: 'Outcome' and 'Tally'. Record the results of your 20 trials here. (3 marks)

4. Analysis: Look at your tally chart. How many times did your chosen outcome happen? Was this result what you expected, or did it surprise you? (2 marks)

5. Conclusion: If you were to repeat this experiment 100 times instead of 20, do you think your results would be more or less accurate? Explain your answer. (2 marks)

Extension challenge: Imagine you have a bag containing 5 red marbles, 3 blue marbles, and 2 green marbles. If you pick one at random, write down the probability of picking each colour as a fraction. If each marble cost £0.50, what is the total value of all the marbles in the bag?