Max’s Multiplication Marathon: Mastering Times Tables

Learning objective: To demonstrate fluency in multiplication and division facts up to 12 x 12 and apply them to solve multi-step problems.

Help Max the monkey solve his jungle puzzles! Show your working clearly, as Max loves to see the logic behind the solution. Ensure you include units (such as £) where required.

Max the monkey has been collecting golden acorns to trade for fruit at the forest market. Each acorn is worth exactly 12 pence. He needs to calculate his total savings and work out how many pieces of fruit he can afford to share with his friends.

Word bank: product · factor · multiple · quotient · calculation · equivalent · estimation

1. Max has 8 piles of acorns, with 12 acorns in each pile. Calculate the total number of acorns Max has. If each acorn is worth 12p, what is the total value of his collection in pounds (£)? (3 marks)

2. Max wants to buy 7 bunches of bananas. Each bunch costs £1.44. Using your knowledge of the 12 times table, explain why the total cost is £10.08. Show your calculation. (3 marks)

3. Leo the lion has 132 berries. He wants to share them equally among 11 friends. How many berries does each friend receive? Justify your answer using the inverse operation. (2 marks)

4. Compare and contrast the relationship between 6 x 8 and 12 x 4. Explain why the products are identical using the mathematical property of doubling and halving. (3 marks)

5. Max finds a mystery bag of 144 coins. He says, 'If I divide these into 12 equal groups, I will have 12 in each group.' Is he correct? Explain your reasoning. (2 marks)

Draw: Draw a visual representation of the array for 9 x 7 using golden acorns, and label the factors and the product.

Extension challenge: Max has £20.00 to spend. He wants to buy as many items as possible that cost £1.10 each. What is the maximum number of items he can purchase, and what will his change be? What might happen if the price of each item increased by 10p? Justify your answer with a detailed calculation.